The Boston Medical and Surgical Journal

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July 28, 1921

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Address.

ADDRESS MADE TO THE AESCULAPIAN SOCIETY, JANUARY, 1920.

BY FREDERICK C. SHATTUCK, M.D., BOSTON.

WHEN I received your flattering invitation to address you my first impulse was to refuse. The patient ether may well be weary of vibrating to the blows of talk. And what message had I worthy of my audience? Two considerations, however, coming together, emboldened me to accept.

The first of these was a remark of our President, Roger Lee, that those of you who had been in the service had had, for the first time in your professional lives, a chance to *think*. For thought there seems to be scant time during either intensive undergraduate study or in active post-graduate life. The spirit of the age encourages action rather than reflection. John Hunter said, "Don't think, but try." This was a pregnant saying, most timely when uttered. Hypothesis and theory, too often built upon the sand, were autocrats in that day. No real advance in biology was possible save through experiment and observation, carefully made and accurately recorded. In Hunter's time, the system makers still occupied the front of the stage.

Am I quite wrong in thinking that today our attention may be fixed too exclusively on the "try" end of the spectrum? Thought and experiment are the parents, the male and female germs of progress. They must unite to produce good fruit, only to be brought to perfection through selection which again involves both thought and experiment.

The Athenians put up an altar to the "Unknown God." The God of Science is a Knowable God, and his altar is set upon a peak toward which many paths converge. One star may differ from another star in glory. Not so the paths toward the altar of truth, provided only that their ultimate and sole aim is the altar. Travelers by different paths sometimes seem to lose sight of one another, and temporarily, at least, to forget how many paths there are.

Has this not been the case with laboratory men and clinicians? I have heard laboratory men called "children" by clinicians. I have known a research man to speak of the practice of medicine as "a despicable calling." I like to believe that a better, mutual understanding has dawned, that team work is coming to the fore. We are often dominated by words because we don't think. Laboratory simply means workshop, though as daily used it connotes only one kind of workshop. The hospital ward and out-patient departments are also workshops, so is the bedside of the private patient. We cannot too clearly realize their interdependence in the struggle for medical progress. Perhaps we do not really fail as much as we sometimes seem to do. It cannot harm the specialist now and then to remember that he is one part of a great whole. Today we are nearly all specialists to a greater or less extent.

You remember how pleased was the Lord when he asked Solomon, "What shall I give thee?" and Solomon besought "an understanding heart"—wisdom. He did not ask for long life or riches, nor for mere knowledge which pertains to things. He asked for a heart capable of understanding things and their relations. You recall Solomon's diagnosis of the true mother of the child claimed by two women. He did not send for experts to report on the *lineae albicantes*, the breasts and their milk, and other physical signs as a present day judge might do, and suspend judgment meantime. His understanding heart led him to an unerring diagnosis, a speedy and expensive cure, unaided by a single instrument of precision.

Pardon me if I seem to digress a bit in briefly considering the rôle of the instrument of precision in medicine. History shows how invariably we tend to overvalue, at first, such instruments; how liable we are to forget that they are, after all, only our servants; how necessary is time to show the proper place of each. Take the clinical thermometer. This has been in use now for, roughly, half a century. I find that the first recorded temperatures in fever cases at the Massachusetts General Hospital were in 1868. During my internship, in '72-'73, the temperature was taken by the house officer on his morning and evening visits, never entrusted to a nurse. The instrument, not self-registering, carried an ivory scale, below which the glass tube was bent at an angle. This was placed in the axilla and read *in situ*. By this time we doctors have learned to evaluate fairly well the services of the thermometer; but it has been far from an unmixed blessing. It has dominated households and inspired countless anxieties while we doctors were learning to interpret its readings. I recall a poor-rich little boy from New York, on whose reaching the age of twenty-one depended the inheritance of some millions. One, I think two, trained nurses were in constant attendance. His temperature was taken several times a day. The over-cared-for child was, of course, delicate; but there seemed to be really nothing the matter except coddling. My sole advice was to throw away the thermometer. Even today, some doctors and more mothers give the temperature precedence over the pulse in infections, pneumonic or other. The attending physician even may state the temperature, as a matter of course, to the consultant; but the rate and character of the heart-beat only on application—and this, after fifty years of experience.

Are not the forces underlying and the influences modifying blood pressure more complicated than those pertaining to temperature? Means of accurate measurement are comparatively recent in general use. Blood pressure, how many sins are committed in thy name! How much harm is to be balanced against the good which the sphygmomanometer has rendered? The blame does not attach to the machine. It attaches to us, to our incurable tendency to overvalue conclusions based on a machine or a method which checks the notorious fallibility of our unaided senses. The blame attaches to resting satisfied with a record, the meaning of which we are to lazy to think out. We doctors are too often in a hurry, impatiently ignoring the fact that repeated trial by many observers under varying conditions—and time—are necessary to establish a truth, to say nothing of its relation to other truths. We are less patient with the natural processes of life today than when I was young, more prone to sympathize with the desire of the wife that her sick husband would "get well or something." Were it possible to make a continuous record of blood pressure in nervous captains of industry, stolid day laborers, and their intermediates, we should get much enlightenment; patients, present and prospective, much benefit.

In 1872, the mere presence of albumin in the urine, at least in the Massachusetts General Hospital, awakened grave prognostic fears. History is not "bunk," even though Henry Ford thinks it such. Ford seems to have more knowledge than wisdom. We could get along without automobiles and Henry Fords better than without history, and history shows that time and the cumulative judgments of the clinician in hospital and general practice are indispensable to fix the place and determine the value of every new method in the study of health and disease. I resist the temptation of other illustrations such as might be derived from the stethoscope and heart murmurs, the stomach tube, chemical reactions, etc., etc., etc.

Have wisdom and knowledge advanced in medicine, side by side, in the last quarter or half century? That wise man, James Jackson, one of the founders of the Massachusetts General Hospital, Professor of Theory and Practice leading practitioner of his day in Boston, is reported to have said, perhaps seventy-five or more years ago, that there was then more known about medicine than the mind of any one man could grasp. If this statement was true for the then times, how much more true for today. Knowledge is so varied, its pursuit and application so technical today that even specialties are divided and subdivided. The influence of the subdivision of work on the worker carries lessons. The shoemaker of olden time made the whole of a finished product. He could express himself in his work. He worked long hours. His work was relatively slow and it was varied. It was not divorced from reflection. The worker at a shoe machine works tensely. His thoughts cannot wander without damage to himself, his machine or his shoe. He produces no whole. He is in danger of becoming a mere cog. There is little which is developmental in his calling. As a man, he is liable to dwindle, rather than grow, unless he recognizes his danger and sets himself to minimize it by the cultivation and pursuit of other interests. Very recently a middle-aged man, now otherwise employed, told me he had been trained as a general machinist, beginning at five dollars a week, and stated that such training is now very difficult to obtain. Some analogy between the above and our own calling seems obvious enough. We are, most of us, average men, largely occupied in what may be called drudgery. Is the upper limit of the mind of man any higher now than it was two thousand odd years ago? Have Plato and Aristotle ever been surpassed? Archimedes saw mechanics in the large. I can see no evidence that genius is either created or fostered by modern life. Genius has more and better tools to work with, but I venture to guess always will be a freak, as rare as unaccountable. If we cannot create genius we fortunately can scarcely keep it down. We should be ready to recognize it as promptly as may be, and lose no time in gratefully profiting by it. Twice, very recently, what seemed to me narrowness of view, came within my ken. A throat and nose specialist in attendance on a healthy looking girl for a minor ear trouble, refused even to examine her chest, but insisted on calling in another specialist for a trifling cough. I was reminded of a clever booklet published in 1904, called "Medical Union No. 6." It is in the Medical Library. I commend it to anyone with a leisure half hour. Again I find a deservedly successful general practitioner, also with a hospital service, apparently unaware that the pneumonia mortality of 25 or more per cent in hospitals dwindles to probably not more than 5% in the well-to-do, even if we include infants and the aged. "Where are the figures?" he said. In the nature of things, the fact cannot be proved by figures in any way comparable to those of the hospitals.

I am sure that if any of you have tried to follow me in my zig-zags in pleading for a combination of breadth and intensity of knowledge as a means of attaining wisdom, you cannot fail to have thought of that Master in Medicine whom we lost all too soon. William Osler was in a class by himself. In our day, such a balance of so many qualities, each so highly, consistently, persistently, harmoniously developed through seventy years of life, is unparalleled, in medicine at least. In the lives of so many great men there is this or that failing to be passed over or excused. Is there anyone in our profession who, personally and through his writings, has come into close contact with so many as did Osler? His life is an open book. In the nearly half century since, in Vienna, I first looked upon that swarthy, intellectual face, with the dark, steady, kindly eyes and winning smile; upon his lithe, symmetrical body, as alert as his mind; and first listened to the charm of his voice, the thought and spirit which it expressed, I can remember but one criticism of him,—that it was his habit to strew flowers in the path. The chloroform babble is so silly that I am almost ashamed to allude to it. His life was a rare blend of "sweetness and light," strength and beauty. To how many has he been an inspiration, an inspiration which cannot fail to act far into the future! His life may be regarded in one respect as a protest against the narrowing tendencies of specialism which permeate life today in all its branches, tendencies to which it is my main purpose, this evening, to call your attention. We all read and refer to his "Practice of Medicine." Do we read and re-read as much as would be for random, I mention "Equanimity," "Man's Redemption of Man," "A Way of Life," etc., etc.

You may remember my earlier statement that two considerations emboldened me to talk to you. The first was that circumstances, of late, have seemed, at least temporarily, to re-introduce thought into the hurly-burly of life. The second consideration is like unto the first; it is, namely, the recent appearance of a book which seems to me to contain and stimulate thought in a very unusual degree. I refer to Sir James Mackenzie's "Future of Medicine," the preface of which is dated July, 1919. It is worth noting that the book is dedicated to Viscount Knutsford, the grandson of Sir Henry Holland, one of the wise men of medicine in his day and generation. I have two copies of Holland's "Medical Reflections," published in 1837, one given me by Osler. It is good reading at the present day, and, in passing, it may be added that Holland was neither a hospital physician nor a teacher; but he was a close observer and a hard thinker.

Mackenzie, after qualifying in medicine, settled in a town of a hundred thousand people, and did general practice, including midwifery and surgery, for twenty years. During these years, he developed the most important advance for a long time in our knowledge of heart disease—I am tempted to say since the introduction of the stethoscope. His career and achievements emphasize the chances for the solution of many pressing problems which lie open to the general practitioner, and to him alone. The general practitoner alone can observe the beginnings and follow the development of many insidious and progressive diseased conditions. The out-patient physician may see the early stages, but he can rarely watch the course; he can seldom materially change or influence adverse factors, even with the aid of the Social Service, that precious advance in medicine for which we are indebted to Richard Cabot. As a rule, by the time the patient reaches the hospital ward, he is "damaged goods," though not necessarily in the sense in which Brieux uses the term.

It has been my good fortune to see the work of many physicians practicing under many different conditions. To numbers of them I take off my hat, wondering how they can maintain such an output, alike in quantity and quality, in spite of full days and broken nights, meantime keeping as well abreast of progress as they do. The long hours of the general practitioner are possible because his work is not monotonous. He is anything but a mere cog in an efficiency machine. He deals with a great variety of conditions and folk, both in his consulting room and in the home. He bows his back to the burdens of others, and thereby grows in strength and elevation of character. His human sympathies are at once sharpened and broadened by the most intimate contact with those in trouble. Almost daily, some patient, or patients, anew teach him the lesson of courage in facing facts, however hard the facts may be. Other lessons, too, are presented to him, lessons charged with the seamy side of human nature, but lessons all the same, which he can turn to profit if he will, as he mostly does. Such a life seems to me singularly promotive of symmetrical growth to full stature, of the development of the *man*.

The danger of modern life in medicine, as well as in many other activities, looks, I repeat, toward narrowness of outlook and toward asymmetrical growth; the danger is inherent; inevitable, if you will. The recognition of danger is the first step to its avoidance. Let each man take thought and look all around his job, seeing its advantages and disadvantages with equal clarity. Plenty of both are always there for the seeing.

In this connection, permit me a more personal note which I hazard, on the chance that it may somewhere, sometime, somehow, help someone. When I began practice, forty-five years ago—Heaven save the mark! I might easily be the grandfather of some of you—I had a dispensary district for two years. Many years ago, but all too late, I saw what it would have meant to me had I only had the vision, and the devotion to follow it,—the guts, "saving your presence"—to live in that district, give my whole time and bend all my energies to the work, just as if it were a remunerative private practice. A young man at the outset of his career could scarcely have a better training. Lines of research and the way to approach them could not fail to suggest themselves to those inclined that way. A year or two of closest contact with the sick poor in their homes might easily be of great value to one's subsequent usefulness and happiness, no matter what the field before him. It would ensure full occupation during the first of the waiting years.

I earnestly hope that I have said nothing to give you the impression that I undervalue the research man, that I do not realize the inestimable benefits which humanity has derived and is bound, possibly, in even greater measure, to derive from him in the future. Pasteur was the greatest benefactor of the human race in the nineteenth century. But the field which has given us Edward Jenner, Nathan Smith and Ephriam McDowell, general practitioners all, is not exhausted. James Mackenzie, for instance, to come down to the present day.

A clergyman once said to me that his calling involves more temptation than any other, in that he can so easily lock himself into his study and read French novels while supposed to be studying, or writing sermons. In like manner, the microscope and test tube may be made excuses for self-indulgence, for laziness, and, worse yet, for self-deception. The pure scientist must depend mainly on compulsion from within. He somewhat lacks the sharp spur of outside pressure. He lacks, in great measure, the necessity of adapting himself to—or, at at least, of sympathetically tolerating—a variety of other folk. The danger of the pure research man lies in isolation: that of the clinician lies in the market place. I am, probably, even more conscious than are you that I have been discursive, and therefore separate into a few single threads what it has been my purpose to say.

I. Let us not only try, but think—try to think, as well as to weigh, measure, and observe.

II. Let us remember that instruments of precision and reactions are our servants, not our masters; that the clinician and Father Time are indispensable to fit them into their places.

III. That we must be alive to the tendency of the time for knowledge to outrun wisdom. The more limited the specialty or sub-specialty, the greater the danger to the man.

IV. That general practice offers a unique field for real research, in that only through it, or certainly only with its aid, is the solution of many important problems to be sought.

V. I do not believe that it would be possible to gather anywhere in this country, an equal number of doctors in so little danger of commercialism. The danger exists,' however. Its avoidance does not lie in group or department store medicine. It lies only in the fostering of and insistence on high standards of professional conduct and thought.

Insofar as I have taken the rôle of a critic, my reason for so doing springs in no sense from a desire to disparage the present or ignore the very real and rapid advance made and making. It springs solely from anxiety lest the good things of the past—and the past had its good things—be swept away or forgotten in the torrent of progress.

I deem it a great privilege to have been allowed to talk to you this evening. I believe there is some truth in what I have tried to say. Perhaps the dreams of old men don't matter much. Surely not in comparison with the visions of the young men. And yet the products of the two combined may be better that that of either singly.

I thank you for your patience and your kindness.

Original Articles.

DIFFERENTIAL DIAGNOSIS IN DESTRUCTIVE LESIONS OF THE GREAT TROCHANTER. REPORT OF TWO ILLUSTRATIVE CASES.

By C. W. Peabody, M.D., Boston.

[From the Clinic for Orthopedic Surgery of the Massachusetts General Hospital.]

The two cases to be reported aroused interest originally from an unusual coincidence of similar characteristics. The patients were two adolescent girls of about the same age. They were at the same time under treatment in the same ward. The location of the lesions suffered by each was practically identical. Not only their chief complaints but their other symptoms were much the same, and the same X-ray diagnosis was made in each. Both received the same type of operative treatment. Finally, on a par as to their immediate convalescence, they were equally happy in the early restoration of normal function. But the ultimate nature of the process found to be going on in each was so radically different that an additional interest seemed to be present from the point of diagnosis, and the cases are accordingly presented.

In introduction it may also be pointed out that Case 1, a resident of this city, was under observation in the clinic from shortly after first onset of symptoms up to operation, while Case 2 came from another state and was not seen until the condition was fully developed, and therefore our knowledge of the early course is less complete. The former patient is accordingly re-

ported as Case 1, although admitted for operation at a later date.

CASE 1. G. S., No. Orth. 23876, a school girl of fifteen, was admitted on the Orthopedic Service 9/17/20 with a diagnosis reading "(1) Osteomyelitis, (2) Neoplasm, of the great trochanter, right," and with a *complaint* of pain and lameness in right hip.

Family History was excellent, with no Tbc. present or known exposure; there had been no miscarriages.

Past History showed all the common diseases of childhood, including pneumonia at age four (without complications), and repeated attacks of tonsillitis till removal of offending glands four years previous. No other history of possible foci or infection and no previous joint affections. Although without serious illness since early childhood, patient had always appeared frail and feeble, and considered by the family to be 'tubercular.'

Present Illness began one year previous, when patient complained of soreness in right hip, but not sufficiently to concern her family till four months later, when the complaint became continual, and it was noticed that she favored hip in walking. She was accordingly brought to the Out-Patient Department for examination. The latter proved practically negative, including an x-ray study, and patient was continued under observation, wearing a bandage-spica.

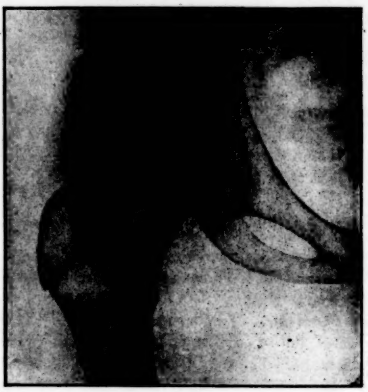
On second examination, a month later, she had developed a distinct limp, complained of indefinite pain at night, not associated with muscle spasm, and motions of the hip showed limitation in rotation to slight degree by pain. X-ray report at this time read, ". . . . right hip distinctly more radiable than left, otherwise negative. Early Tbc. arthritis should be considered." Clinically, an early epiphysitis was also considered and a plaster walking spica was applied.

At third examination, two months later, findings were about as above, but with an additional complaint of pain referred toward the knee and also toward the back or lateral aspect of the hip, and an increased limp. The roentgenologist at this time reported that "plates confirm previous observation and show an area of dim. density just above the acetabulum, on ilium." The child was then appearing much run down and had lost a little weight. Accordingly, she was sent out to the country for general hygienic treatment.

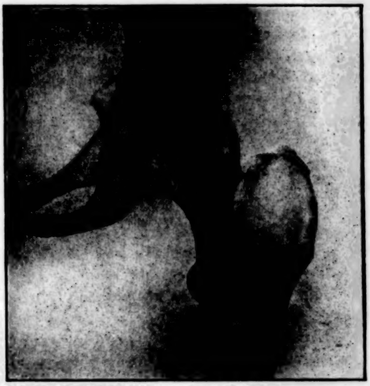
On the fourth examination, three months afterward, her general condition was much improved and some gain in weight had been made, but the complaint had not changed, and she seemed to be limping more. All hip motions were now found slightly restricted and, in addition, there was some tenderness on palpation close behind the great trochanter. However, as palpation on opposite side brought much the same response, this symptom was not given much weight. Gluteal bursitis was considered as a possibility, but as no relief followed a course of hot applications, the hip was again immobilized in a plaster cast.

When the patient reported for the last time, two months later, the existing process had become so definite that she was referred for admission with findings given below.

Physical Examination showed a fairly well developed and nourished, somewhat sallow girl, walking with a decided limp. Nothing abnormal was made out in the lungs, there was no particular adenopathy, and her examination was otherwise normal, save for *right hip.* Mo-



CASE 1.—NORMAL HIP.



CASE 1.—AFFECTED HIP.

tions of the latter were slightly limited in all directions and considerably in internal rotation, and with pain on full normal abduction referred to the trochanter. There was slight fullness behind the latter. There was no shortening, but about one inch atrophy of thigh (plaster cast?). Palpation over lateral aspect of trochanter brought involuntary flinching and showed definite localized sensitiveness not found on the other side. There was no induration, injection, reddening or local heat. There was no tenderness or thickening over the hip joint.

X-ray Report, 9/20/20: "Bones about right hip joint showed considerable atrophy. There is marked thickening of soft tissues at outer aspect of joint. There is deformity in ilium just above acetabulum probably area of diminished density previously described. There is an area of bone destruction in the neck of the femur and a much larger one in the great trochanter. Over tip of the trochanter, there is a dense, iregular shadow, suggestive of deposits of lime salts. Findings are probably due to Tbc."

Operation 9/21/20 by the writer through the courtesy of Dr. P. D. Wilson. Ether anesthesia. Vertical incision over trochanter through overlying tissues. Upper part of gluteus max. tendon split and retracted and medius divided near insertion. An attempt at sub-periosteal reflection of the latter broke through a thin osseus shell into a large cavity occupying the whole trochanter and extending mesially toward the neck, filled with sero-sanguinous thin brown fluid and mushy material, and lined by a friable, reddish-brown membrane. There was little softening of the surrounding bony walls. The contents of the cavity were curetted out and preserved as specimen No. 1. After carefully wiping out all débris, the surrounding bone on all sides to a depth of ¼ inch was cut away with an osteotome and saved as Specimen No. 2. The muscle attachments were then sutured to the periosteum of the shaft over the flat base left at the site of the trochanter. The wound was closed in layers, without drainage, and no apparatus was applied.

Pathological Report. "No. 1: Mx. exam. shows richly cellular tissue composed of large pale-staining vacuolated cells and numerous cells of foreign body type. There are scattered areas of hemorrhage. Diagnosis, Giant-cell sarcoma. No. 2: Normal bone."

Convalescence was afebrile and entirely comfortable. The wound healed by first intention. The x-ray department was consulted in regard to Roentgen therapy in view of the lesion found, but advised against same. By the tenth day, patient could move hip without pain and was allowed up in a chair. At end of two weeks was allowed to continue convalescence at home without weight-bearing. Latter was started at end of a month, and by second month, motions of the hip were found free without limitation, and there was no more tenderness than found over any operative incision.

End Result. This patient visited the clinic by request, 4/8/21, and the following facts were ascertained: Two months after operation, her hip seemed of normal strength and she returned to school. Since then, she has been able to run, skate and dance, without symptoms in hip, and has no limp. She has recently been selected in a gymnastic competition because of good posture and all-round development in gym. work. Examination showed a slight hypertrophied scar, without tenderness, normal contour of hip over trochanter, all motions free to full range.

CASE 2. V. L. D., No. Orth. 238636, a school girl, aged 17, was admitted 9/11/20 with the diagnosis, "Osteomyelitis of right great trochanter, probable Tbc," and with a *complaint* of pain and lameness of right hip.

Family History shows definite exposure to Tbc., mother having died of this disease; one brother died of typhoid; otherwise is negative. There have been no miscarriages.

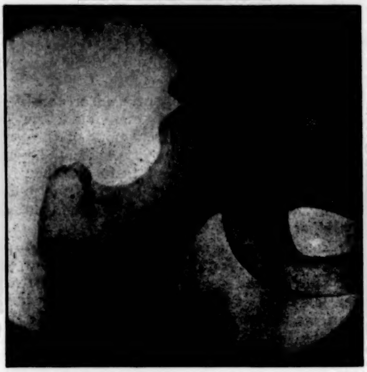
Past History was excellent. As a child, she had measles, pertussis and pneumonia, the latter without complications, and none of the other febrile affections, including typhoid. She had no history of tonsillitis, bad teeth or other foci of infection, digestive tract always functioning normally. Had always been considered an unusually strong and healthy girl.

Present Illness is considered by family to be caused by a fall eight years previous, but patient stated that she had merely a bruise and brief lameness at that time and no subsequent symptoms till less than four years ago. At that time, she began having a dull, indefinite pain in right groin, after exercise, later radiating down toward knee. It was never severe enough to incapacitate her, till the last few months, when the pain became continuous, though dull, and was referred to outer aspect of hip; and recently, after use, had increased in severity, and persisted at night. There had never been any sharp pain or sudden onset of pain in the night, but occasionally the limb had been "drawn up by an involuntary tightening of the muscles." Also, standing on that limb alone brought on pain in region of great trochanter. She had not noticed any shortening or deformity. She had found that rest in bed for a week gave temporary relief from symptoms.

Physical Examination showed a very well developed and nourished, healthy appearing girl, but walking with a noticeable limp. There were no signs in the lungs, no general or local adenopathy, and no other notable findings, save in right hip. Motions of same were free, except for a moderate limitation of rotation with pain referred to trochanter. There was localized tenderness over the latter, not found over hip joint. Fullness or tenderness in the gluteal region was not observed. In the standing position, there was exaggerated lumbar lordosis and tenderness on further hyperextension of the lumbar spine. At this point, in the case, the possibility of a postural condition, with nerve trunk irritation, manifested along distribution of gluteal nerves, and also of a gluteal bursitis, with secondary involvement of great trochanter, was considered in diagnosis.

X-ray Report, 8/28/20: "Right great trochanter shows a circumscribed area of apparent bone destruction on external aspect; there is evidence of proliferation at margins. Upper segment of sacrum shows partial separation and seems less developed on left than on right, but does not seem dislocated." 9/15/20: "Appearances are similar to that previously described, and are probably due to Tbc."

Operation, 9/16/20, Dr. Z. B. Adams. Ether anesthesia. Vertical incision through superficial layer and sub-periosteal reflection of muscle attachments. Under medius incision was found a cup-shaped area measuring 2 inches by 1 inch by ½ inch, containing grumous and cheesy material and softening bone. Culture and pathological specimen secured. Ablafion of this area, at the same time leaving only a shallow saucer-like depression, was accomplished by a liberal sloping resection of walls and base, such as advocated by the writer in a previous publication.* The muscle attachments were resutured to the margins of the area in such a way as to leave no dead space, and the wound closed without drainage. No apparatus applied. Evidence of a preëxisting gluteal bursitis was looked for before closure, but not found present.

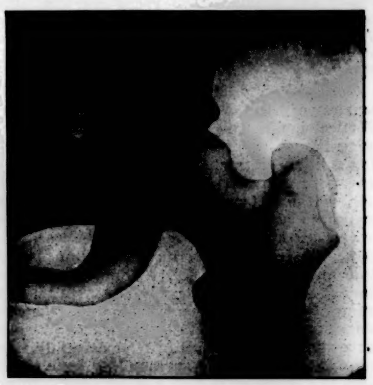


CASE 2.—NORMAL HIP.

Pathological Report. Culture: "No growth." Mx: "Tuberculosis."

Convalescence was afebrile and comfortable. Wound healed by first intention and stitches were out on ninth day, and as on next she was able to move hip without discomfort, was allowed up in chair. At end of two weeks, left hospital on crutches, to continue convalescence at home.

End Result. This patient has not returned to the city since, but in a letter to the S. S. Department, April 21, gives the following facts. She started weight bearing at the end of a month, and two weeks later felt so well that she engaged in Red Cross canvass of the country town in which she lived, walking considerable distances. At the end of it, she became very lame in affected hip, and had to go back to her crutches for a few weeks. The symptoms subsided, and she has not used them since. She has no limp, and states that she now finds the hip no different from the other, except that in some way she can always tell by a vague sensation in it that it is going to rain.



CASE 2.—AFFECTED HIP.

In a discussion of these two cases, it would seem worth while to sift carefully all the clinical evidence presented, noting the strikingly numerous points of similarity, but more especially any distinctions that may establish the differential diagnosis. Two girls, of an age when an infective bone disorder is more to be expected than a new growth, come complaining of lameness of the right hip of gradual onset, and sub-acute to chronic duration. The patient who developed the Tbc. lesion, did have a positive family history with exposure, which is worth noting, but the absence of such data in the other, of course has little weight. However, the impressions gained in case one from the past history and general etiology, and early treatment in the case was, indeed, based on such a theory; while the second girl comes after most excellent previous health. The latter's present symptoms are of duration favoring such a chronic disease as Tbc; and so is the period of twelve months' complaint of the former, though it is not exceptionally extended for a comparatively benign type of tumor.

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* Persistent Bone Sinuses, Surg., Gyn. and Obstet., November, 1920.

The chief symptoms are almost identical: pain the hip region and groin, a little later radiating toward the knee and finally referred to the trochanter, and the development of a moderate limp. Neither had any typical night pain. The story of muscle spasm and of pain brought on or made worse by exercise given by the second girl, typical of an infective bone lesion, is entirely lacking in the first. In fact, while rest always brought relief to No. 2, rest, and even immobilization, for a considerable period accomplished little in amelioration of symptoms in the girl who revealed the neoplasm, which in comparison, seems quite significant. It might be noted at this point that so far, *i.e.*, on the histories given, there is nothing inconsistent in either with hip-joint disease, and in fact, such a diagnosis was only ruled out by the further findings.

Turning to the physical examination, the first girl's general appearance obscured the picture, being distinctly suggestive of the so-called strumous diathesis, and not fully accountable by the possibility of a benign neoplasm, which might be much more easily conceived in the exceedingly robust second patient than the Tbc. lesion found. Adenopathy was absent in both, and lungs were equally negative to physical examination. The findings as to hip motion naturally would be the same, as the same muscles were involved. The note of full ness behind the trochanter in Case 1 was not accounted for, and, if anything, suggested Tbc., with a gluteal bursitis, considered also on theoretical grounds in Case 2. The best clue, it has seemed to the writer, to the diagnosis in Case 1, lies in the findings on palpation over the trochanter. Both patients showed tenderness, it is true, but the second merely tender, while the first was not only tender, but very sensitive, flinching involuntarily, in fact with a reaction suggesting an acute inflammatory process. Yet, in spite of this, inspection of the overlying skin showed nothing, and at once raised the question whether any infective lesion in so subcutaneous a situation could produce those symptoms without showing any of the other cardinal signs of inflammation. The venous changes present over other sarcomata are not necessary in this type.

In discussing the x-ray findings, it should first be stated that a review of the plates in Case 1 resulted in ruling out as probable artefacts, the findings reported outside those of the great trochanter. Secondly, while the reports have a similar tenor and conclude with the same diagnosis, actual side by side comparison of the plates show a good many differences. Plates of Case 1, taken at an earlier date than the preoperative one reproduced here, show the destructive process no more extensive than in Case 2. Regardless of differential, it seemed also of great interest that undeniable evidence of a formative process is to be found in both. We are coming to realize that such is not uncommon in Tbc. of a low grade, but it does not seem consistent in a degenerative sarcoma. At the operation on Case 1 it was observed, however, that the expanding tumor had pushed upward and outward the dense and not easily eroded cortex of the digital aspect of the trochanter, leaving it in a position which gave the x-ray appearance of calcification in the tip, and furnishing an argument for the tentative diagnosis of osteomyelitis with which the patient was admitted. In other respects, however, the x-ray appearances seem distinctive. Around the small lateral area of destruction present in Case 2, there is little atrophy or diminution of lime salts, *i.e.*, the process is definitely circumscribed. But the plates of the other show an extensive area of irregular diminution of osteoid tissue, more than accountable by bone atrophy, but less radiable than an abscess cavity. The roentgenologist subsequently stated that this plate would be very suggestive of a new growth.

To sum up the important features revealed by this differential study, it may be said that in Case 1 the progressive course not influenced by constitutional or hygienic treatment or by rest of the part, the marked sensitiveness in a subcutaneous area lacking any of the cardinal signs of inflammation, and the more diffuse changes by x-ray, indicate the diagnosis of neoplasm; while the more chronic course, the exacerbation of symptoms on use with alleviation by rest, and the circumscribed, moderately reactive x-ray picture, point toward the Tbc. lesion found to be present. It probably has suggested itself to the reader that as the operative treatment was much the same, the matter of a pre-operative differential diagnosis is less important. In this respect, two aspects should be emphasized, one the relative course and prognosis without operation, *i.e.*, the degree of necessity for operative intervention; and second, the great difference in the importance of the time of election for such intervention. In meeting these considerations, the proper diagnosis is highly desirable, and herein lies the ultimate justification for this paper.

This study was not taken up with the impression that it had to do with unique or particularly rare conditions. Of course, giant-cell sarcoma is not an every-day tumor, and has a predilection for the tibia, but it might well be expected in any other bony location. The records of the hospital were found negative for an occurrence in the upper femur, but that may be of minor importance. On the other hand, it was conjectured that, although Tbc. is uncommon in the diaphysis, the cancellous bone of the great trochanter provided the same favoring conditions for the lodgment of the bacillus as did the epiphysis, possessing, like them, a separate center of ossification, and that therefore Tbc. lesions would not be infrequently found. Curious to know the course of some of these, the writer consulted the hospital records, but with surprisingly meagre results. An index of all diagnoses made on ward patients since 1870 showed Tbc. of the great trochanter occurring just five times. A careful search was then made through the files of all cases of Tbc. seen in the Out-Patient Department in the last ten years. The diagnosis of bone or joint Tbc. in some form had been made 3,062 times in that period and only three times did the diagnosis of Tbc. of the great trochanter appear. Two of these patients were among those found in the ward files, giving a net addition of one. A search through the files of osteomyelitis revealed one case with such location in which the causative organism had not been determined, and etiology was unknown, therefore possibly inclusible in the Tbc. group, making seven. None of these were operated on in an early stage, all developing an abscess, breaking down spontaneously, with a resultant secondary infection, persistent sinuses, and a prolonged course of drainage and recurring abscesses, in spite of treatment. As regards the above statistical evidence, it is possible that such cases may have been unrecognized, and diagnosed as hip-joint disease, or simply as "Tbc. of the hip." If it may be assumed from the course of the above seven cases that the lesion eventually breaks down, it would seem impossible that such lesions should ultimately escape proper diagnosis and classification. Even if an occasional case resolves and cicatrizes spontaneously, it seems proper from the above investigations to draw the following two conclusions: (1) that Tbc. lesions of the trochanter are quite rare, and (2) that when present, they should be given surgical intervention before the sinus stage has been reached.

No cases with similar diagnosis were found reported in the current medical literature for the last ten years. Half a dozen standard textbooks made no mention of similar incidence of either disease. Goldthwaite, Painter and Osgood report a case of Tbc. of the greater tuberosity of the humerus without arthritis, which may be comparable to Case 2. Dr. R. B. Osgood has told the writer of a case in his private practice treated for some time for a gluteal bursitis, but in which repeated x-rays finally showed a lesion of the trochanter which proved Tbc. and responded as satisfactorily to operative treatment as did this one.

In concluding this study, the writer wishes to mention his obligation to Dr. R. B. Osgood for many helpful suggestions in regard to its preparation.

EMPYEMA. REPORT OF CASES OCCURRING AT BOSTON CITY HOSPITAL, ASSIGNED TO THE WRITER IN 1920.

By J. C. Hubbard, M.D., Boston.

I am to report, this evening, on the cases of empyema referred to me during the past year. If I wished, I could compile tables of statistics from these cases which would make you dizzy, but when all was done, they would amount to little, for the number of cases is too small to be of any more importance than suggestive value, and because it is impossible to reduce to tables several of the most important factors—the patient's resistance and the virulence of the particular form of bacteria. We know how the epidemics of pneumonia and "flu" have varied in virulence from time to time, and from place to place. Deductions from tables of cases of empyema, therefore, should be made from large numbers, covering a considerable length of time. I am, therefore, refraining from burdening you with a lot of valueless tables.

There are, however, a few points which are interesting and perhaps suggestive. There were thirty-five cases, of whom four died. Let us look more closely at these fatal cases.

The first was a very sick man whom we had been watching along from day to day in an attempt to pick the right moment for emptying his chest. He died almost immediately after the insertion of a catheter. The wrong time evidently was chosen, and this death must be classed as due to operation.

The second case is of a woman whose back became infected through the puncture hole of an aspiration on the medical service, culture gave hemolytic streptococcus. Erysipelas developed on her back and she died twelve days after a rib resection.

The third died of auricular fibrillation when he was free from fever and was having no discharge from the incision. His only operation had been the insertion of a catheter under gas anaesthesia.

The fourth case was that of a woman who had been sick thirteen weeks before entrance. A catheter was inserted, and then a piece of rib resected. She never had any resistance, and gradually failed, overcome by septic absorption, and died three months after entrance.

The first death was due to bad judgment. The second was due to erysipelas. The third was due to auricular fibrillation, and the fourth to septic absorption. This, luckily, and I say luckily advisedly, is a good showing.

It may be of interest to review for a moment the different bacteria found on culture, though no deductions of any importance can be drawn from them. Thirteen were due to streptococcus hemolyticus, eight to pneumococcus, type 1, and the others scattered. When I began with the empyema cases, I thought that I could tell from the gross characteristics of the fluid in the chest what the particular germ was which was causing the infection. Soon I discovered that I was wrong, and that by culture alone was it possible to tell.

Because of various reasons, it was impossible to treat the cases along any definite plan, for the routine was frequently upset through the quarantining of wards because of smallpox and the contagious diseases, every one of which seemed to be present in the hospital. We simply did the best we could. The treatment was therefore, not according to the best technique of any particultr method.

Now, how did the cases come out, as far as a pneumothorax was concerned, after this what might be called irregular treatment? In twenty-five cases, there was a definite statement about the presence or absence of a pneumothorax as shown by an x-ray taken usually just before the patient left the hospital. Mention is made of the x-ray findings in two of the cases that died. One had a catheter inserted, and then a rib resection. About a month after the resection, a small pneumothorax was present. A month later, the report of a second x-ray was made without mention of a pneumothorax. A month after this last x-ray, and two months after the earlier one, the patient died. It seems reasonable to believe that the pnumothorax had nothing to do with the death.

The second case had a pneumothorax ten days after a rib resection. Four days later, she died of erysipelas.

Five cases that recovered had a pneumothorax in the last picture. Two of these, after having left the hospital healed, returned in two to six months because the wound had broken open and discharged. One of these had had a primary rib resection and one had insertion of a catheter. The pneumothorax with the other cases apparently was of no importance. One reported that she had just married and was well. Twenty cases had no pneumothorax, the duration of time elapsed between operation and x-ray varied from twenty-two days to eight months.

CASES OF PNEUMOTHORAX.

I. Pneumonia—pneumococcus type I. Empyema. Catheter followed by resection; x-ray taken twenty-two days after resection, shows small pneumothorax. Another, few days later, no mention of it. Writes, seven months after discharge, that she is well, just married, and keeping house.

II. Empyema — streptococcus hemolyticus. Primary resection. X-ray one month later. Pneumothorax practically all of left side. Left the hospital, wound closed. Six months later, as it broke out, had to return to hospital.

III. Pneumonia. Empyema. Pneumococcus type IV, apparently only trochar. Pneumothorax.

IV. Pneumonia. Empyema. Pneumococcus type III. Catheter. Two months after discharge had to return with collection of pus in chest.

V. Empyema. Streptococcus hemolytic. Catheter, and later, rib. Twenty days after rib, had a pneumothorax, lung expanding.

It is interesting to see that the type of operation had little to do with the presence of a pneumothorax. Catheter only two, catheter and rib resection four, primary rib resection one.

Four cases of the series had to return to the hospital after having been discharged healed. Two of these cases when discharged the first time had a pneumothorax. The third case had no pneumothorax. The fourth case probably was without one, as no definite mention is made of its presence. It would seem from this, that the presence of a cavity in the thorax, though the sinus to it may have healed, is a danger. Although some cases, healed but with an unobliterated cavity, have no further trouble. Others return to the hospital because the sinus originally closed, has broken open and discharged.

There are records of the type of operation in thirty-two cases. Of these, eleven had a primary rib resection, twelve the insertion of a catheter with, later, a secondary rib resection, and nine a catheter insertion only. Of these, seven recovered and two died—one immediately, and the second of auricular fibrillation when surgically progressing favorably. That so many made a satisfactory recovery with nothing more than drainage through a catheter, is interesting.

To a questionnaire sent out, sixteen cases answered. Thirteen were well; three, however, had to return to the hospital because the wound which had been healed, had broken open and discharged. The length of time since discharged, varied from five to nine months. Apparently the thirteen well cases were really well, though there was an occasional mention of some discomfort in the side, with a little cough. The folly, however, of believing that end results can be determined in this length of time is shown by the following case. On July 8, the patient was discharged healed. In August, the wound opened again, but finally healed. In November the wound opened again and she returned to the hospital. All this time she had considered herself well. The occurrence of a few cases like this, shows the folly of trying to draw conclusions about end results till many months have elapsed.

Before closing, I will answer the question which might well be asked, how I should now treat an ordinary case of empyema. I cannot back up my opinion by figures, but I have, in my own mind, a fairly definite idea of the treatment. In the first place, an empyema is no longer the emergency it was formerly considered. I believe in not operating for several days, to try the effect of repeated aspirations, and later, to put a catheter into the chest through a trochar, under gas oxygen anaesthesia. The end of the catheter is clamped so that the method is a closed one for a few days. I do not believe it is necessary to work hard or bother the patient much with attempts to keep a tight joint, for long. Some cases will recover with no further treatment. Others however, will not drain properly or show evidences of absorption. These require the resection of a piece of rib, which operation I should do again under gas oxygen.

I believe irrigations and installations of Dakin's solution are of benefit. Unless the proper careful technique is carried out, this solution is no better than any other.

NOTE.—I am indebted to Dr. Elsworth for the interpretation of the x-ray plates.

THE PRESENT STATUS OF THE RADIATION TREATMENT OF HYPERTROPHIED TONSILS.[*]

BY HERMAN A. OSGOOD, A.M., M.D., BOSTON.

Assistant Visiting Physician to the X-ray Department, Boston City Hospital; Consultant Reontgenologist to the Boston Dispensary.

PROBABLY no recent development in radiation therapy has so quickly penetrated to the laity and aroused so much discussion as the question of the radiation treatment of hypertrophied tonsils. As in any new development of the science, there is always danger of exploitation by x-ray and radium enthusiasts on the one hand, and of opposition due to ultra conservatism on the part of the supporters of older methods on the other.

It has been known for some time that the x-ray has a selective action on certain types of tissue. Lymphoid tissue is one of the types so affected. Very small doses of x-ray will stimulate the growth of lymphoid tissue, and larger doses will inhibit or destroy it. Murphy[1] and others have shown that this selective action of the x-ray on lymphoid tissue can be used to induce the atrophy of enlarged tonsils.

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[*] Read before the Boston Public School Physicians, March 4, 1921.

The problem, then, is to select a quality, and quantity of radiation which will inhibit or destroy the lymphoid tissue without producing injury to the adjacent tissues. The limit in the case of tonsils is, of course, the toleration of the skin over the area. The maximum dose, therefore, must be a sub-erythema dose, and since the erythema dose varies with the age of the patient, and somewhat with the personal idiosyncrasy, due allowance must be made for these factors. Secondly, the interval between doses must be so chosen as to be long enough for the normal tissue in the area rayed to recover from the effect of the ray, and short enough so that the more susceptible lymphoid tissue will not have time to recover. Experiments have shown[2] that if a sub-erythema dose is given to normal skin, a recovery amounting to 80 per cent. will take place in about two weeks, and practically an entire recovery may be expected at the end of three weeks. These factors, then, limit the interval between the doses to be administered.

Our observations are based on a series of cases treated both in clinic and in private practice. These cases were not selected, but were taken as they were referred, without regard to the type of tonsilar disease. Our method of treatment was a modification of that described by Witherbee.[3] Filtered radiation in sub-erythema dose was used. The areas treated should include the skin immediately over the tonsils, and adenoid area if desired. All other parts are protected by lead foil in such a way that any radiation which could reach them would be negligible. It was found that a series of three or four such treatments, given at an interval of two or three weeks, was sufficient, in the average case, to produce a definite atrophy of the hypertrophied tonsil in a period varying from six to nine weeks after the administration of the last treatment. The raggedness disappeared, and the surface became smooth and shiny, in practically all the cases. Many of them show a definite clinical improvement after the second treatment. The tonsil itself is not actually removed, but decreases to about one-fourth of its original size. We deemed it inadvisable to push treatment beyond this point in the belief that some tissue should be allowed to remain to preserve the normal tonsilar function. Many cases of tonsilectomy, where the tonsil tissue was entirely removed at an early age, have later resulted in a compensary hypertrophy of the neighboring lymphoid tissue of the oral ring, resulting in a so-called recurrence or in a granular throat. We believe that conservative x-ray treatment may eliminate this undesirable feature.

It should be borne in mind, however, that the action of the x-ray on the tonsils is purely on the lymphoid tissue. There is no sterilization of the bacteria or direct action on the material in the crypts. The result obtained is a mechanical one, in that with the shrinkage of the lymphoid tissue the crypts open, and the surfaces become smooth, thereby evacuating the caseated material and mechanically eliminating the bacterial infection. It is possible by this method of treatment, to avoid hemorrhage, the discomfort and loss of time of operation, and the pulmonary sequelae which frequently occur after tonsillectomy in the adult.

With the dose and method used, it is safe and reasonably sure in cases of hypertrophied, or chronically infected tonsils with hypertrophy where the infection is due to bacterial lodgments in crypts formed by overgrowth of lymphoid tissue. It is especially indicated in those cases where operation is deemed inadvisable or must be delayed because of cardiac or pulmonary complications. The disadvantages are chiefly the time required to obtain final results and one necessity for the selection of suitable cases. It should be understood, however, that radiation treatment in its present stage is by no means a replacement of surgery. There are many types of cases, as, for example, the atrophied, chronically infected tonsils, the abscessed tonsils, etc., which are obviously unsuited for x-ray therapy.

Much has been said about the x-ray's dangers over the neck. These dangers are: (1) the possibility of x-ray dermatitis; (2) the possibility of other than lymphoid tissue being affected by the ray; (3) the possibility of late degenerative changes in the skin.

In answer to the first objection, it should be recalled that the dose given in the average case is much less than that required to produce an erythema of the skin. The risk in the hands of the expert radiologist is no greater than that which the patient undergoes at the hands of the expert laryngologist.

It is true that the sensitiveness of the skin to x-ray varies with the age, younger children being more susceptible than adults, but this is taken into consideration in estimating the dose to be administered. The dose is measured in physical factors, which may vary for different types of x-ray machines. It is obvious, therefore, that the operator should have sufficient experience with his machine to judge its limitations, and the variations in the factors used to calculate the erythema dose. If the treatment of tonsils by x-ray is left in the hands of a trained radiologist accustomed to the use of his equipment, the possibility of dangers from x-ray burn is very remote indeed. The greatest danger in this respect is the probability that this new method will be practiced by anyone and everyone who possesses an x-ray machine. The general practitioner with no previous experience may well hesitate before operating on the tonsils, but may see no harm in using his office x-ray unit for treatment, just as he has been accustomed to use it for taking x-ray plates. It should further be remembered that results from this method are slow, and the tendency to increase the dose where results are not promptly obtained should be carefully guarded against.

The question of injury to other than the lymphoid tissue is prominent in the minds of not only many of the patients, but also of their physicians, and is a question not easily set aside. It should be remembered, however, that the dose used is so small that only very susceptible types of tissue can be permanently affected, and lymphoid is extremely susceptible as compared with the surrounding tissues.

We are frequently asked what effect radiation of the tonsils would have on the thyroid and, possibly, on the pituitary body, but if the lead protection sheet is properly applied no radiation can reach these areas. It also appears from our experience in prolonged treatment of tubercular adenitis in children that the x-ray may have an inhibitory action in the development of the tooth follicles, resulting in deformed lower molars. We have, therefore, found it advisable to protect by lead foil that portion of the lower jaw which comes into the field in all cases of young patients where these teeth have not been completely formed.

Degenerative changes in the skin, occurring several years after treatment, in case of prolonged radiation, have been observed in thyroid patients even where no record of a definite erythema had been noted at any time. In the treatment of tonsils, however, the dose is much smaller than that which we found to be safe over the neck. From results of our treatment over the thyroid area, we believe that the fewer number of treatments with the smaller doses required, are well within the limit of safety even for very young children. It is further possible, by sub-dividing the dose into a large number of applications to reduce still further the possibility of skin atrophy, or telangiestatic changes.

At first we felt that the difficulty of keeping the children quiet during the time required for exposure would be a serious handicap, and we devised various means of securing demobilization and protection of the parts which were not to be exposed. On the whole, however, we have had very little trouble, and rarely find it necessary to strap the patient to the table, if due care is exercised to avoid frightening the children at the start. In fact, most of our little patients were allowed to lie prone on a pillow and the motor gradually turned on and allowed to run a few moments until the children became accustomed to the noise and vibration, and then the x-ray was turned on. Many of the children actually went to sleep, and had to be awakened when the treatment was completed.

We have attempted to include the adenoid area in these treatments and have noticed a definite reduction of adenoid tissue in many cases, but we do not feel that up to the present time our experience justifies positive statements.

In summary, the present status of radiation treatment for hypertrophied tonsils is that of an optional method to surgery. It is not a replacement of tonsillectomy. It is a method which can produce, definitely, an induced atrophy of hypertrophied tonsils without hemorrhage, discomfort, or loss of time. It does not sterilize. Its effect on the bacteria and crypts is that of a mehcanical drainage.

As compared with the tonsillectomy, it is, of course, the method of choice in cases where complications increase the operative risk. Its disadvantage is the time required for results, and the necessity of selecting suitable cases. It is a new method which has given very gratifying results clinically, thus far, but has not been proven by the test of time.

REFERENCES.

[1] Murphy and others: Jour. A. M. A., Jan. 22, 1921.
[2] Kingery: Arch. of Dermatology, April, 1919.
[3] Witherbee: Am. Jour. of Roentgenology, February, 1921.

A NUTRITION CAMPAIGN IN ROCHESTER

BY WILLIAM R. P. EMERSON, M.D., BOSTON.

THE city of Rochester, and Monroe County, New York, in which it is situated, have joined forces in undertaking a most thorough-going campaign against malnutrition.

A start was made last summer by the Tuberculosis Association which arranged for the weighing and measuring of 1000 children attending the Daily Vacation Bible Schools. The conditions and problems revealed led to an institute in November, conducted under the direction of Nutrition Clinics for Delicate Children, Inc., Boston. This was attended by over one hundred experienced persons, including twenty-two physicians, many nurses and representatives of all types of schools and child-helping organizations. This training has now been undertaken by the University of Rochester, which has inaugurated regular courses for nutrition workers.

A systematic campaign to identify malnourished children was begun, reaching all public and parochial schools. It was found here, as elsewhere, that malnutrition is not, as is often supposed, confined to the poorer sections of the city. One group in a poor Italian district was found to have only 18% of malnutrition as compared with 38.5% in one of the "best" neighborhoods. The results of the weighing and measuring of the school children shows 25% are 7% or more underweight for their height.

Physical examinations were given to all these undernourished children, and from the beginning, the presence of parents at these examinations was required, both because the examination can be made more complete in their presence, and instructions given at this time of excited interest carry more weight than they do as health teaching without the object lesson.

The most common of physical defects which cause malnutrition is diseased adenoids and tonsils. Cases calling for operation began to pile up by thousands, and the Association of Allied Hospitals, backed by the Community Chest, undertook to provide for them without the usual delay. Convention Hall Annex was fitted up with facilities for receiving eighty children a day. From January 10 to February, 1,780 cases were operated upon—only two behind the schedule; 13,372 operations have been performed to date.

Especial attention has been given to overcoming the prejudice often met against hospital care. The press has coöperated in a most satisfactory manner, giving front page space to material which helped children and their parents to have right ideas of the situation. A reporter remarked that it is as easy to get space for nutrition work as for a murder case. Moving pictures are shown to the children assembled at night for operation the next day. The popular interest has become so great that one boy who did not need an operation appeared at the hospital, having purchased an admission card from another child.

A modified Sluder method has been used for the operations, and thus far there have been no accidents or other untoward results. The time required for complete rest and recovery, after the operation, does away with the customary loss in weight, and already the benefits arising from the removal of obstructions to breathing have been evident in many cases. One boy who had been losing weight for some time, gained four pounds in the two weeks following the operation.

The parochial schools have entered into this program in an excellent spirit of coöperation. At a nutrition class meeting in one of the church schools, were to be seen—in addition to the seated line of children, backed by their parents and the nutrition worker — the teacher, the school physician, representatives of various child-helping organizations, and the parish priest. Two cases which came up received attention at once from the parish priest. One was that of a father absent in Canada, whose consent for an operation was difficult to secure; the other was a girl suffering from over-fatigue, under circumstances which only special influence with the family could remedy.

In order to meet the needs of the rural districts of Monroe County, units are being organized and sent out, which will afford the children of the country all the facilities of diagnosis, operation and after care now furnished in the city.

Special consideration is given to children who fall below standards required for securing working papers. Following the excellent work done with this group by the Elizabeth McCormick Memorial Fund in Chicago, provision will be made to aid these children to come up to normal condition and then to secure the coöperation of employers in follow up care, which will stand by them until health is assured. The State Employment Bureau is following this departure with special interest. The City Department of Health is coöperating in all sections of the work.

Isaac Alder, president of the Tuberculosis Association, reports that the nutrition class work is the most important contribution the Tuberculosis Association has made to the health work of the city and that it is the key to much tuberculosis prevention. Superintendent Weet of the public schools states, "More than any of the other good points in which the nutrition class work abounds, I value the home co-operation. George Eastman says, "This is the best work there is.""

The school authorities have given this work the same standing as is given to a class in arithmetic or language. Admission to the class is made only after conference with parents, but once the program is entered upon, the child is not allowed to withdraw for petty reasons. If he drops out, he loses rank, just as he would in failure in another subject. Full credit is given for observing rest periods and carrying out other details of health education.

Twenty-two nutrition classes have already been organized and the work is being extended as fast as the local conditions permit. Arrangements have been made for its supervision for the remainder of the year by representatives of the national organization, Nutrition Clinics, for Delicate Children, Inc., Boston.

SIGNIFICANT REACTIONS OF THE ARTERIAL TENSION. MANIFESTATIONS OF THE ANGIO-KINETIC ENERGY CLINICALLY OBSERVED AND INTERPRETED.*

BY CLAËS JULIUS ENEBUSKE, BOSTON.

SECOND PART.

V. CONTINUOUSLY UNSTABLE VASCULAR TONUS AT ANOMALOUS AND VARIABLE RADIALIS MAXIMUM TENSION LEVELS.

THE figures in the last column of Table I, Chapter II (See JOURNAL of April 21, 1921), give the numerical difference between the basic radialis maximum tension value (test *a*) and the tension as modified by the reflex depressor reaction of test *d*. These figures express at a glance, the numerical magnitude of the sudden changes in the radialis maximum tension which takes place through the influence of the mechanical afferent excitation represented by test *d*. Comparing all the other cases on Table I with Case No. 12, it appears that they all possess a lesser stability than this latter case. If we assume Case No. 12 to represent the degree of stability of the vasomotor mechanism which characterizes the healthy adult man, it would follow that these figures of the other cases in the last column of Table I indicate various degrees of vasomotor instability, or if we choose so to express it, they are lability-indices of the various cases (17, 18, 19).

The instability of the majority of the cases manifests itself not only by depressor, but also through pressor reactions, as seen in columns *b* and *c*. If we compare the tension value under influence of the greatest pressor reaction with the depressor reaction test *d*, we obtain difference values, which express the whole width of the sudden changes under such influences as represented by tests *b*, *c*, and *d*. The second figures in the last column, Table I, represent these values.

The width of sudden changes in cases of basic value lower than the normal on Table I, varies from —10 m.m. to —50 m.m. (Case 7); in cases with basic value higher than No. 12, this width varies between —50 m.m. and —140 m.m. (No. 27).

The great frequency of occurrence of cases manifesting such instability, and the great width of sudden changes in the majority of the individual cases, clearly justify the supplementing of the tests *a*, *b*, *c*, *d*, with one additional test so formulated that the magnitude of the mechanical stimulus thereby is regulated and controlled so as to be equal in every case, at every reiteration of the test and be equal even when performed by different observers working independently of each other. A test, developed for this purpose and easily performed, will be described in a following chapter (XIII).

The tests *a*, *b*, *c*, *d*, as stated in Chapter II, are intended to be used as means of rapid orientation in the state of the arterial tension. If the result of these tests in a given case is equal with Case No. 12, or almost so, no further test of radialis maximum tension is required. If the basic value of radialis maximum tension is less than 120 m. m. no further mechanical

* Received October 28, 1920, for publication.

test of radialis maximum is required. Even if it is 120 m.m. or more, no further mechanical test is necessary. But it is worth the while in these latter cases to make one additional test so formulated that it is not open to the critical remark that the magnitude of the mechanical stimulus may be variable, owing to difficulty of grading them "by free hand" to equal intensity each time they are performed. Reason for what has been thus stated will develop on the following pages.

The nature of the several sudden changes in the radialis maximum values and their significance, can undoubtedly be clearer percieved in a latter part of this communication when several other reactions of the arterial tension shall have been described and discussed. In this place, attention may be invited to the following considerations, in logical sequence to the consideration of similar nature in relation to the spontaneously stable vasotonus discussed in preceding Chapter IV.

The figures enumerated on Table I reveal the fact that the resistance of the arterial tension at the several anomalous basic radialis maximum values in all these cases is insufficient, and is overcome by the demands represented by the mechanical stimuli of tests *b, c, d.* It is also overcome by other various demands. The insufficiency of resistance which is numerically perceivable in the tests *b, c, d,* is expression of a lower grade of coördination and adaptability of the vasomotor mechanism in these cases, which is not able to adjust itself to the variable influences from the environment and from inner organs, because the compensatory mechanisms whose harmonious coördination tends to sustain a stable vasotonus by adequate constriction and dilatation of the small and smallest arteries in different vascular regions, do not function efficiently; or, in other words, instability of vascular tonus may be characterized as *a state of arterial tension in which the automatic and reflex excitability of the cardio-vascular neuro-muscular mechanism possesses a low grade of coördination and adaptability to various and changing demands, and, in consequence, the basic radialis maximum tension value is easily disturbed and changeable within wide limits.*

Constant co-existence of continuously abnormal radialis maximum tension on the one part, and certain mental diseases or pulmonary tuberculosis on the other, in persons suffering from these diseases, have been observed by the author *ab novo* and proven by clinical statistic methods: distribution of values, frequency maxima and frequency minima (16-23). In some subsequent chapter, facts shall be presented which prove that certain types of anomolous vasotonus coincide with diminished immunity against certain diseases.

VI. ABOLITION OR DIMINUTION OF VASCULAR REFLEX EXCITABILITY-REFLEX-ANGIOPLEGIA.

Cases are met in the neurological clinic, in whom the stimuli of tests *b, c, d* do not produce any perceivable reflex-reaction, and yet they are not cases of the kind alluded to in the discussion of the spontaneously stable vasotonus (Chapter IV). In these cases the reflexes are stale because the vascular reflex-excitability is extinguished or diminished; they are not cases of normal vasomotor stability.

Cases of this class are recognized by the fact that medical examination reveals the presence of peripheric arteriosclerosis with or without cardiosclerosis and various organic diseases of the cerebro-spinal system, or other morbid condition. Even though the basic radialis maximum value in these cases may be 150 m.m. Hg., it differs from the stable vasotonus of Case No. 12 in Table I. This case is free from symptoms of disease at the time at which the normal vasotonus was observed, while at an earlier period, on the contrary, six to eight months previously, this case presented the ordinary symptoms of chronic bronchitis and asthma, with profuse expectoration, dry and moist râles of variable magnitudes, sonorous-sibolant, coarse-subcrepitant, but at that time his radialis maximal tension was oscillating between 230 and 250 m.m. or more, with exacerbations connected with the

TABLE II.

No.	Name	Age	Occupation	Diagnosis	Date		A	B	C	D
31	William W.	56	Laborer	Parkinson dis.	5, 14, '20	Sitting	150	150	150	150
31	*Idem.*	56	"	" "	5, 14, '20	Lying	180	180	180	170
32	William T.	27	Ex-Service, A.E.F.	War neurosis	4, 16, '20	Sitting	190	190	190	190
33	Fred G.	29	"	" "	6, 15, '20	"	180	180	180	180
34	Nellie J.	41	Wife	Psychoneurosis	4, 6, '20	"	190	190	190	190
35	Dora S.	41	"	Obesity	6, 27, '20	"	250	250	250	250

asthmatic attacks and remissions at more quiescent intervals, consequently it presented increased vascular reflex excitability and incoordination.

The cases of reflex-stale radialis at a maximum tension value of 150 m.m. which the author has observed hitherto, have presented one character which is exemplified in Table II by Case No. 31.

No. 31, a man of 56, suffering from Parkinson disease, examined in sitting position, shows a radialis maximum tension of 150 m.m. stale to reflex excitation. When immediately afterwards, the patient is placed in horizontal position, the radialis maximum basic value is found to be 180 m.m., stale to pressor excitation, almost stale to mechanical depressor excitation. At repeated examination several times in the same manner, the result remained the same. The explanation of this phenomenon which seems probable from the author's point of view, is this: The sensitive afferent fibres in the intima of the arteries have lost their natural permeability owing to the degenerative process in the vessel wall; or, owing to sclerosis, the spindle-shaped muscle cells in the small arteries have lost their reflex-excitability and contractibility; or the vasomotor fibres cannot function for simlar cause. When the position of the body is changed from one requiring more systolic energy and more peripheric vascular resistances to another requiring less, the arterioles not dilating adequately in adaptation to a position requiring less vascular resistances, the surplus of systolic energy is stored up in the arterial reservoir as lateral pressure and thereafter perceived at the renewed arteriotonometric test as increased radialis maximum tension. It goes without saying, that, theoretically, other mechanisms are imaginable and formulable, but they will scarcely be less difficult to sustain under pressure of criticism. At a state of normal function, the peripheral arteries and aorta reciprocally react to variable demands, the former preventing undue filling and distention of the peripheral arteries, and aorta, preventing undue filling and distention of aorta, thus maintaining by harmonious coördination, a stable, adequate tension in the arteries.

Regarding the cases of war neurosis (shell-shock), Nos. 32 and 33, in whom arteriosclerosis is ruled out, the author has no explanation of the reflex-staleness to offer; notwithstanding his desire to help this class of sufferers, he has had too few cases of shell-shock to study.

Only one remark more at this point, in relation to this subject. When medication with neutral salts of one-atomic bases is continued for weeks or months in succession, the radialis tension attains an artificial stabilization at different tension levels, 190-230 m.m. in different cases. This is comprehensible in view of the fact that the elimination of the salt is slower than the intake and, in consequence, the salt-tension in the blood and the tissues increases to a certain point. To this hypertonicity of the blood, the walls of the arterioles react with constriction to a degree which differs, depending upon the different magnitude of the hypertonicity in different cases, and upon the difference of individual reactibilities to increased salt-tension of the blood. Under such conditions the radialis tension is stale to reflex-excitation in many cases. This explanation should not be understood as undervaluing the different actions of the several kations or anions which, however, is less well demonstrated at present. It goes without saying that the radialis tension is stale to reflex-excitation, whenever the permeability of the afferent or efferent paths of the reflex arch engaged is lost at any localization, owing to disease, or if the spindle-shaped muscle cells in the tunica media of the small arteries have lost their reflex-excitability through fatigue, malnutrition, intoxication, degeneration, infiltration or other cause—efficient to produce such result.

VII. VASCULAR HYPERTONIA.

Keeping in mind what has been stated in Chapter IV in discussing the subject of spontaneously stable vascular tonus, with Case No. 12 chosen as illustration of the normal arterial tension, it appears that Case No. 13 cannot be considered as possessing the characteristics of normal arterial tension. This case presents a state of arterial tension in which the basic radialis maximum level of 150 m.m. is identical with the normal, but in which the resistance of this state of basic radialis maximum tension is less than the normal: it reacts to tests *b* and *c* with pressor reactions of +30 m.m. each, and to test *d* with depressor reaction of —20 m.m., making a total width of changes amounting to —50 m.m. Here the question may be raised as to how large a width of changeability under the tests *b*, *c*, and *d*, can be allowed within physiological limits. Regarding this point, no fast rules should be laid down, for the present at least. From a large experience, extending over many years, the author has retained the feeling that a margin of changeability (a lability index, if you please) of + or —20 m.m. is probably the limit of variation under physiological conditions. Anything more than that (and surely anything reaching + or —30) is a state of arterial tension which points to some etiology and implies a risk or chance of pathogenic influence, even though consequences may be slow to assume a definite nosological picture. In Case No. 13 on Table I, we find a basic radialis of normal value but an instability (180 m.m., 130 m.m.), in the make-up of which the pressor reactions predominate over depressor reactions. For this reason the author looks upon it as a state of unstable vasotonus at normal tension-level with a probable tendency toward the development of hypertonia.

The term vascular hypertonia, as used in the present communication, is understood to imply every state of arterial tension in which the basic radialis maximum value is more than 150 m.m., even if the depressor reaction to test *d* should be 30 m.m. or more below the normal. All the subsequent cases in Table I, after No. 13, are examples of vascular hypertonia of variable and increasing degrees. Each case presents special features of significance, but in the present connection the author cannot stop and discuss individual cases. That must be reserved for future communications. It remains here to endeavor to characterize briefly vascular hypertonia.

In logical connection with the discussion of the subject of unstable vasotonus at variable radialis maximum values in Chapter V, the vascular hypertonia may be here characterized as *a state of arterial tension in which the automatic and reflex excitability of the cardiovascular mechanism possesses a low grade of coördination and adaptability to variable demands, and in which the compensatory constrictor and dilator mechanisms function in a disordered or inefficient manner, resulting in unstable vascular tonus with predominance of constrictor influences and tendency to radialis maximum tension levels exceeding 150 m.m. Hg.*

VIII. VASCULAR HYPOTONIA.

The cases 1 to 11 in Table I, have a basic radialis maximum value lower than 150 m.m. Hg. and predominance of depressor reactions.

Vascular hypotonia may in this connection be characterized as *a state of arterial tension in which the automatic and reflex excitability of the cardio-vascular neuro-muscular mechanism possesses a low grade of adaptability, and in which the compensatory constrictor and dilator mechanisms function in a disordered or inefficient manner, resulting in unstable vasotonus at anomalous and variable radialis maximum values, with predominance of depressor reactions and tendency to tension levels lower than 150 m.m. Hg., even down to the lowest levels compatible with life.*

The age in the cases of vascular hypotonia, in Table I, varies between 4 and 48 years, but vascular hypotonia of even the lowest degree may be met at any age in asthenic diseases of long standing (also in the agonal stage of acute disease). The proportion in numbers of hypotonic and hypertonic cases varies, of course, in different clinics. In hospitals, for *insane,* as far as the author has seen hitherto, the proportion may approximate that found in Table I, only with the difference that the highest tension values are not so frequent as in the Neurological Department and similar clinics. In hospitals for *pulmonary tuberculosis* the vascular hypotonia is by far more frequent than hypertonia, according to investigation by the author.

Among the *feeble-minded,* normal basic radialis maximum value is of frequent occurrence, although of lesser stability than in the healthy adult (example, No. 36, Table III), but cases, presenting hypertonia or hypotonia are not rare, and in these latter cases there is always some somatic or psychic complication which accounts for the anomaly. The feble-mindedness as such, the mental defectiveness as such, is compatible with normal arterial tension. This distinction is of practical importance. A case of feeble-mindedness which is complicated with anomalous radialis maximum tension is always capable of being improved in some degree by therapy addressed to the cause of vascular dystonia. Something remains to be said in relation to feeble-mindedness which must be reserved for future occasions. The author has not had opportunity to make extensive investigation of the arterial tension of children in clinics, particularly devoted to their welfare, but incidental examination of numerous children in other clinics makes the author believe that vascular hypotonias, as represented by cases No. 1-7 is not rare in children's clinics.

(To be continued.)

THE BOSTON
Medical and Surgical Journal
Established in 1828

THURSDAY, JULY 28, 1921

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: *$6.00 per year, in advance, postage paid for the United States, $7.56 per year for all foreign countries belonging to the Postal Union.*

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

THE AVARICIOUS MEDICAL STUDENT.

ALTHOUGH it is recognized that war conditions opened opportunities for personal gain as well as great sacrifices, it is disappointing to find that certain medical students took advantage of technicalities and inadequate investigation by authorities to obtain money without rendering service.

The National Government provided a bonus of sixty dollars to all enlisted men, and in 1919, Massachusetts appropriated twenty million dollars for the purpose of paying one hundred dollars to all of its men who were discharged after *active* service (Chapter 283, Acts of 1919). All men of specified age in medical schools were enrolled as a part of the forces, but in most instances were assigned to inactive duty and allowed to continue their medical studies. These men were potentially a part of the military forces and the Government could have ordered them to any duty at any time, but as a rule, did not do so. Upon the cessation of the war, these men were discharged, and upon certification by school officials were, in many instances, paid the state bonus of one hundred dollars, in addition to the federal appropriation.

Some men were honorable enough to decline to take money since no service had been rendered. A considerable number applied for the bonus, and in the application made the statement that they were in active service, and although prosecuting studies during this period, did not even attend training camps, and in many instances did not wear uniforms and were never under orders. The state paid the money and now finds that many men were never entitled to receive it. Upon notification of the error, some men have cheerfully made restitution; others decline, and state in substance, that we have the money and, now what are you going to do about it?

Men of this type can never bring credit to the medical profession, but will be quite likely to regard the practice of medicine as a means to a money end. Of such men there will be those who practice extortion, or charge for apparent but no real service, and perhaps may be influenced by the love of money to commit more serious crimes.

Representatives of the State Treasury have appealed to the Board of Registration in Medicine for assistance in dealing with these men, to whom the term grafters may properly be applied, and if it can be shown that this Board has jurisdiction, such parasites will be denied registration on the ground of lack of moral character.

When one considers the measure of loyalty and human service displayed by the great majority of our profession, no words can adequately express contempt for the behavior of those who would try to retain money not legally acquired. Active service never meant prosecution of medical studies. These men should be grateful for the opportunity to complete their education while others were sacrificing income and, in some cases, gave their lives.

* * *

A FEATURE OF LIFE INSURANCE.

THE METROPOLITAN LIFE INSURANCE COMPANY have recently issued a little pamphlet entitled "Lengthening Life Thru Insurance Health Work." This is made up of "graphs" showing a study of the trend of mortality among the policy holders of the Metropolitan, compared with the trend of mortality of the United States registration area for the past ten years. It is well to remember that the number of policy holders of the Metropolitan amounts to about twenty million, and being a business proposition, all information regarding this vast number of people is on the statisticians' desks each week for study and compilation. In 1909, the Metropolitan recognized that it was desirable to lengthen the lives of the policy holders, especially of the so-called industrial group, comprising about one-half of the company's policy holders. This group, from its exposure to the stress of industrial conditions, had a death rate at the time slightly higher than the death rate of the general population.

In 1909, the Company began a systematic campaign of education, teaching by their booklets and tracts the fundamentals of health. These have been distributed by their agents directly to the homes of the policy holders by the collectors of the Company, who have been made not only collectors of premiums but also social and health workers and observers as well. This work of education has been further developed by a Visiting Nurse Service, wherever possible utilizing the local visiting nurse, or where there was none, introducing one to the community. This service looks after policy holders and their families when ill, and incidentally teaches sanitation and hygiene. Up to January, 1921, nearly 12,000,000 visits had been made, and the distribution of health literature, made through all sources, had reached over 213,500,000. The Company has attempted to coöperate with all movements to advance constructive and progressive health work in all communities and by all state and municipal officials.

The first page of the pamphlet shows that there were 38,000 fewer deaths in 1920 than in 1911, had the mortality rates of the latter year prevailed. The diminution among the Metropolitan Industrial Policy holders is nearly twice as rapid as has been the fall of the mortality rate among the general population of the United States registration area. In the matter of tuberculosis of the lungs, upon which special stress has been laid, the gain has been still greater. There was in the year 1920 a saving of 11,000 lives over what would have been the case had the 1911 death rates been maintained.

It must be remembered that this industrial group, socially and economically, are decidedly inferior as insurance risks to general population, and that this work has saved many lives which would have had to be alleviated by public funds raised by taxation.

Many persons have criticised the expenditure of funds for health purposes, certain sects even making an appeal to the public that all health work is wrong, that there is no such thing as disease and suffering. Is not the work of the Metropolitan a complete refutation of this stand? The business company recognized that by increasing the length of life and decreasing sickness and mortality, which it found to exist, it would save money for itself and incidentally make the lot of the millions of people who were dependent on it much more endurable by the diminished sickness and economic loss which was thereby saved.

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THE INVESTIGATION OF CERTAIN SO-CALLED TROPICAL DISEASES.

It is with pleasure that the JOURNAL calls attention to the announcement signed by Thomas A. Forsyth, Secretary of the Trustees of the Boston City Hospital.

This service has great scientific and practical importance and Massachusetts will profit by it.

Although attempts at the development of similar work have been made at the Carney and the Massachusetts General Hospitals in previous years, they were not continued long enough to accomplish all that was desired. Under present conditions of travel and interchange of commodities, many diseases are not confined to localities especially favorable for their development, and in countries where they are not frequently encountered, may not be recognized unless practitioners are warned and made familiar with the characteristic symptoms.

The following information submitted by Dr. Shattuck is of interest in connection with the problems:

1. Cases of beri-beri develop not infrequently in New York among the Chinese population.
2. Relapsing fever has oppeared in two small foci in one of the western states. In each place there have been a considerable number of cases.
3. The possibility of the existence of endemic hemoptysis deserves consideration. This disease is produced by the lung fluke, Paragonimus westermanni, and is common in China and Japan. A prominent symptom of the disease is hemoptysis and it runs a chronic course. It may be inferred, therefore, that cases of this disease might be found in the United States among the Japanese or Chinese, and that some of them may have drifted into sanatoria for tuberculosis. The diagnosis of pulmonary paragonimiasis is ordinarily easy, the ova being found in large numbers in the sputum.

ANNOUNCEMENT.

The Trustees of the Boston City Hospital wish it known to the Officers of Health in particular, and to the Medical Profession of the State of Massachusetts, that they have authorized the organization of a Service for the diagnosis and treatment of cases of tropical diseases, including certain parasitic and infectious diseases rarely seen here and more common in foreign countries, and that this Service is now ready to receive patients.

Dr. Richard P. Strong, Consultant in Tropical Diseases to the Hospital and Professor of Tropical Medicine at the Harvard Medical School, is keenly interested in the undertaking and is prepared to assist with advice.

The work of the Service for Tropical Diseases has been undertaken by Dr. George C. Shattuck, who will also assume the duties of Assistant Professor of Tropical Medicine at the Harvard Medical School September first. It would be appreciated if physicians and health officers would avail themselves of this service and refer suitable cases to the same.

Arrangements for admission of patients should be made in advance with Dr. John J. Dowling, Superintendent of the Hospital. Further information regarding the Service for Tropical Disease can be obtained by writing to Dr. Shattuck at the Hospital.

(Signed) THOMAS A. FORSYTH,
Secretary of the Trustees of the Boston City Hospital.

◆

MEDICAL NOTES.

HAMPDEN DISTRICT MEDICAL SOCIETY.—The regular summer meeting of the Society was held at the Monson State Hospital on Tuesday, July 19, 1921. The Society was the guests of Dr. Everett Flood. Lunch was served at 2 P.M. Following the luncheon, there were moving pictures of epileptic cases. Dr. Flood showed a series of x-ray plates of epileptic heads and a few cases were shown. The hospital was open for inspection. A baseball game between the Monson team and Hampden District was played.

This year Dr. Flood completes a service of forty years for the State, and this was the last opportunity to be his guests.

HERVEY L. SMITH, *Secretary.*

BOSTON reports a decrease in the percentage of malnourished children in the schools from 2.12 per cent. in 1915-1916 to 2.02 per cent. in 1919-1920. The Health Demonstration at Framingham shows that 8.2 per cent. of the school children could be classed as poor according to evidence of malnutrition.

Kingsley and Dressler estimate that from 2 to 10 per cent. of all children should be in open air schools. In Massachusetts, out of an enrollment of 607,805 pupils in schools, 2,922 were in open air schools.

Brookline School Committee states that the incidents of open air school régime are: Fresh air, rest and food. No one of these three can be dispensed with. Good shelter and clothing are, of course, implied.

WEEK'S DEATH RATE IN BOSTON.—During the week ending July 9, 1921, the number of deaths reported was 149 against 158 last year, with a rate of 10.26 against 11.01 last year. There were 25 deaths under one year of age against 28 last year.

The number of cases of principal reportable diseases were: Diphtheria, 39; scarlet fever, 18; measles, 85; whooping cough, 10; typhoid fever, 4; tuberculosis, 39.

Included in the above were the following cases of non-residents: Diphtheria 3; scarlet fever, 4; measles, 2; tuberculosis., 3.

Total deaths from these diseases were: Diphtheria, 3; scarlet fever, 1; measles, 1; whooping cough, 1; typhoid fever, 1; tuberculosis, 10.

Included in the above, were the following cases of non-residents: Diphtheria, 1; tuberculosis, 2.

Encephalitis Lethargica, one (non-resident) death.

WEEK'S DEATH RATE IN BOSTON.—During the week ending July 16, 1921, the number of deaths reported was 155 against 162 last year, with a rate of 10.67 against 11.28 last year. There were 16 deaths under one year of age against 20 last year.

The number of principal reportable diseases were: Diphtheria, 32; scarlet fever, 13; measles, 60; whooping cough, 7; tuberculosis, 50.

Included in the above were the following cases of non-residents: Diphtheria, 8; scarlet fever, 4; tuberculosis, 7.

Total deaths from these diseases were: Diphtheria, 1; tuberculosis, 15.

Included in the above were the following cases of non-residents: Tuberculosis, 2.

OFFICIAL ANNOUNCEMENT of the membership of the Provisional Health Committee appointed by the Council has now been received from Geneva by the League of Nations News Bureau. The appointment of this committee represents a compromise designed to meet the difficulties created by the refusal of the United States to permit the *Office of International Hygiene* at Paris, of which it is a guarantor, to coöperate with the proposed health organization of the League. The new committee, which is to act as advisor to the Council and the Assembly on all matters of public health and to devise preliminary measures for the coördination of existing national and international health bodies, is made up of twelve experts selected by the Council as private individuals and with no regard to anything but their personal ability and standing. To these are added representatives of the International Labor Office and the League of Red Cross Societies designated by those bodies at the invitation of the Council.

The Committee as now completed has the following membership: Dr. G. S. Buchanan, Great Britain; M. Velghe, Belgium; Prof. Madsen, Denmark; Senor Pulido, Spain; Prof. Leon Bernard, France; Dr. Charles Havelock, India; Dr. Alberto Lutrario, Italy; Dr. Yoneji Myagawa, Japan; Dr. Calmette, Morocco; Dr. Mimbela, Peru; Dr. Chodzko, Poland; Dr. Carriere, Switzerland; Dr. Luigi Carozzi, International Labor Office; Prof. Winslow, League of Red Cross Societies. The absence of any American name on this list is noticeable.

As finally developed, the health organization of the League should have the following objects: to act as a connecting link between the health authorities of all countries; to act as a clearing house for information concerning everything that constitutes a menace to public health; to form a sort of general staff when an epidemic threatens to overrun a number of countries; to coördinate the efforts of the Red Cross Societies in their work on behalf of "improvement of health, prevention of disease and the mitigation of suffering throughout the world" as prescribed by Article 25 of the Covenant; to coöperate with the International Labor Office for "the protection of the worker against sickness, disease and injury arising out of his employment"; to advise voluntary organizations requesting assistance; and, finally, to establish health missions when asked to do so by the League of Nations or by any country belonging to the League.

Bookkeeping of Babies Shows Large Waste of Infant Life.—Since 1915 the Federal Government has been able to keep a ledger for the birth registration area showing profit and loss in terms of infant life and death. The figures for a five-year period are given for 18 large cities in a brief report entitled "Infant Mortality in Pittsburgh," which has just been issued by the U. S. Department of Labor through the Children's Bureau.

Of the nine large cities in the birth registration area since it was established in 1915, Washington, Philadelphia and New York show the most satisfactory progress toward a reduction of rates, though Minneapolis has constantly maintained the lowest rate of any of the nine. In each year of the five-year period, 1916-1920, Pittsburgh lost more babies in proportion to its births than any other of the nine cities.

In Pittsburgh as a whole, in 1920, there was a loss during infancy of one life out of every nine. The rates varied greatly in different parts of the city, the rate in the most unfavorable ward being 157 deaths for every 1,000 births, while in the most favorable ward the rate was only 64 per 1,000.

Nearly one-half of the babies who failed to survive died before they were a month old, when deaths are largely due to natal and prenatal causes. It has been clearly demonstrated that such deaths are largely preventable through care and instruction for the mother before the baby is born, and skilled care at and shortly after birth. Nearly one-fourth of the deaths were caused by gastrointestinal diseases. Deaths from these causes occur, for the most part, in the heat of summer. They can be reduced through instructions to mothers in the proper care and feeding of babies and through civic supervision to insure purity and proper handling of milk supplies.

Milk stations, maternity and baby clinics, and public health nursing service have been established in Pittsburgh. An extension of such services is necessary if the city is to deal effectively with the problem of infant mortality, and if the ledger for the next five years is to show saving of infant life.

Health News.—The opening of wards in general hospitals for tuberculous patients, as recommended by the American Medical Association at its recent annual meeting in Boston, will, it is believed by the U. S. Public Health Service, be of enormous benefit, not only to most of the two million known victims of the disease in the United States, but also to thousands of others in whom the disease is incipient and easily suppressible, if promptly treated. Tuberculosis in this stage is difficult and often impossible of positive diagnosis, even by an expert; and many persons, even when told by their family doctor that their case is "suspicious" and that they should take precautionary treatment, fear the stigma of an avowed tuberculosis hospital and put off action until recovery has become long and difficult. In a general hospital the diagnosis will not be made public and the family will not be embarrassed, but at the same time all necessary precautions can be taken to avoid danger of infection to others.

The resolution was prepared and recommended by the National Tuberculosis Association in 1916; its approval now by the American Medical Association shows a very marked change in medical sentiment.

In support of the new policy it is argued that in many small cities two hospitals, one general and one tuberculous, can be run only at a loss, but if combined, would pay operating expenses, especially as the combined hospital would draw many secret tuberculous cases. Many general hospitals could easily enlarge their facilities by fitting up wards, roofs, porches, and unused open-air spaces and thus provide greatly needed space for tuberculous patients, both former army men and civilians.

The routine treatment of tuberculous patients in all general hospitals, instead of as at present in only about one-eighth of those in the country, should enable people in moderate circumstances to obtain preliminary treatment in their home towns instead of being forced to go without or to go to resorts. Such preliminary treatment would habituate the patient to the regimen essential to his cure and to the protection of others and would enable him to go back to his home and get well under home treatment, as he probably would not have done without such training.

Visits to the hospital will also familiarize members of the patient's family with sanitary precautions, such as the sputum cup, which commonly horrifies them, and is soon given up by home patients.

Visits by the family physician to his patient in the hospital would familiarize him with the treatment and enable him to diagnose other cases much earlier. It would also enable him to supervise the later home treatment of both this patient and of others. At present, although tuberculosis is the most common of all serious diseases, its treatment is neglected because general practitioners are in the habit of sending their patients away.

Dr. Murray P. Horwood of the Department of Biology and Public Health of the Massachusetts Institute of Technology, is conducting a public health survey of Tippecanoe County, Indiana, during July and August, under the auspices of the Tippecanoe County Tuberculosis Association. Tippecanoe County includes the city of Lafayette and the town of West Lafayette, the latter being the home of Perdue University.

The survey will include an investigation of the following factors: water supply, sewage disposal, refuse collection and disposal, milk supply, sanitation of food stores and restaurants, housing, school sanitation, school hygiene, organization and activities of the health department, hospital facilities, anti-tuberculosis activities, vital statistics, and analysis of the city budget.

The purpose of the survey is to ascertain exactly the condition of the factors affecting the public health, and to formulate a program for the improvement of the public health based on the fidings of the survey. The aim is to attack the tuberculosis problem, not only by considering the disease itself, but also by improving the general health of the community.

Broncho-Pulmonary Spirochetosis. — The occurrence of broncho-pulmonary spirochetosis is comparatively rare. This circumstance, together with the peculiar characteristics of the disease, makes it a particularly individual problem. The victims of this disease are apparently suffering from tuberculosis, They have recurring hemoptysis for months. Usually chronic bronchitis, with loss of weight, emaciation, and a chronic cough ensue. Hemorrhages sometimes last for weeks and then may stop for weeks. These cases are not tuberculosis, however, for upon examination of the sputum no tubercle bacilli are found, but large numbers of motile spirochetes. Bloedorn and Houghton, in a report of three cases, found that these organisms are more refractive and active than treponema pallida, and that they tended to be of two distinct types. One type was thin, delicate, and threadlike, with more regular and numerous indulations; the other type was coarser, with few indulations and heavier staining.

There has been little investigation made upon this disease. Castellani first described it in 1906. Since then there have been reports of cases occurring for the most part in the tropical climates. It is probable that the disease is more common in the United States than is realized, but because of its close symptomatic resemblance to tuberculosis, it is seldom recognized until the sputum is examined and the characteristic organism identified. Cases respond to treatment with the arsphenamins very rapidly. There have been cases which when treated for tuberculosis were considered hopeless, but when treated with arsphenamin, have recovered completely.

In view of the fact that this disease is more prevalent than is realized and that it does not respond to treatment, it is important that every case of supposed tuberculosis that does not show tubercle bacilli in the sputum should be carefully examined for spirochetosis and syphilis. Prompt and intensive treatment with the arsphanamins may be expected to produce well-nigh miraculous results.

The Bacteriological Diagnosis of Human Botulism.—In an article on Botulism, published in *Public Health Reports* for June 10, 1921, Meyer and Geiger report the results of their studies of the organs and of the stools of cases of botulism.

"Portions of the organs are ground in a mortar with sea sand and emulsified with saline. Stool specimens are diluted with saline until the formed portions are finely divided. The emulsions are placed in 250 c.c. culture flasks and heated for one hour at 60° C. They are then mixed with 100 c.c. sterile beef heart medium, which consists of one part of ground beef heart and two parts of peptic digest broth of a reaction P-h 7.4. The mixture is stratified with oil or, better, with vaseline. The flasks, which are closed with rubber stoppers and sealed with Imperial or Major's glue, are exhausted of air as completely as possible. After incubation for from 10 to 30 days at 37° C., the centrifugalized supernatant fluid is administered, in 1- to 2- c.c. doses, to guinea pigs. The presence of *B. botulinus* toxin is definitely ascertained by a neutralization test with known type A, and B. *B. botulinus* antitoxic sera. Isolation of *B. botulinus* is accomplished by fractional heating, enrichment, and deep cultivation in liver-peptone agar. Heating of the emulsions at 60° C. for one to two hours alone insures the possibility of obtaining proper cultures, as is shown in the case reports.

From the examination of the organs of two fatal cases and of the stools of two other cases, the writers conclude that "the foregoing observations indicate that the spores of *B. botulinus,* when presumably ingested in the poisonous food, may remain in the intestinal canal and may be eliminated in the stools of typical botulism cases. Several important problems suggest themselves for immediate experimental study or investigations on human cases of this disease; the following points deserve particular consideration: (1) Determination of the average period of fecal discharge of *B. botulinus* spores in severe and mild cases of botulism; (2) quantitative estimation of the eliminated spores per 1 or 10 grams of enema or formed stool; (3) quantitative comparison of the spore content of the causative food and that of the stools; (4) testing of filtered stool suspensions, on guinea pigs, for the presence of toxin; and (5) testing for *B. botulinus* spores the stools of normal beings who eat raw fruit or vegetables and live in districts in which the organism is quite common in the soil.

"These investigations would undoubtedly contribute information as to the possible pathogenicity of *B. botulinus* spores as suggested by Orr, Edmondson, Giltner, and Thom and others. *B. botulinus* possesses a noteworthy degree of growth and adaptability, and it is possible that the spores can germinate in the paretic intestinal tube and form toxin. Some personal observations on spontaneously diseased domesticated animals justify this suggestion. It appears also of importance to know if botulism convalescents can remain "spore carriers" and, as such, assist in the progressive pollution of the earth with dangerous bacteria. The diagnostic value of the demonstration of *B. botulinus* spores can only be accepted when repeated tests on normal stool samples have demonstrated an absence of this organism. An experimental study of the problem mentioned under (5) in the preceding paragraphs is in progress. The examination of numerous sewage samples of urban and rural origin has thus far failed to give positive *B. botulinus* cultures, and we therefore feel confident that the stool test will be of practical value. However, it remains to be demonstrated as to the number of days of a botulism patient is capable of discharging *B. botulinus* spores. The observations made by Thom, Edmondson, and Giltner (8), and others, on guinea pigs, strengthen our belief that the spores may be demonstrated only in the fecal remnants of the causative meal. Inasmuch as the discharge of this material is quite often delayed for many days, on account of the intestinal paresis, positive findings may be recorded for two, perhaps even three weeks.

"A quantitative estimation of the spores in the stool samples or in the causative food offers no technical difficulties. For example, in one of the recent outbreaks, the spinach responsible contained *B. botulinus* spores in practically a pure state. Shake cultures and particularly those in dried liver agar, gave colonies which could be readily counted.

"The finding of *B. botulinus* spores in the jejunal wall, but not in the chyme, of the particular intestinal loop mentioned may be merely accidental or may vaguely support the recently advanced, but rather fanciful conception (9) that '*B. botulinus* when taken into the human system, lodges in the digestive tract, and the toxins produced there spread over the body.' It is our intention to discuss this phase of botulism elsewhere in detail; nevertheless, the diagnostic significance should be emphasized. We had recently occasion to study, in coöperation with Dr. L. R. Vawter, of Reno, Nev., a cattle disease in which *B. botulinus* apparently exhibited invasive properties. Invariably the organ was isolated from the inflamed duodenum and jejunum, the liver, mesenteric lymph-nodes, etc.

"It is noteworthy that our two attempts to isolate *B. botulinus* from the spleen were not successful. These results may, in part, be due to the fact that post-mortem invasion was made impossible by the early removal and careful preservation of the tissues after death.

SUMMARY.

"*B. botulinus*, type B, has been isolated from the jejunal wall of a case of botulism fatal on the fifth day of the disease. Spleen cultures in two instances were negative for *B. botulinus*. Stool specimens of two clinical cases of botulism, obtained from two different outbreaks, contained *B. botulinus;* type A, on the sixth, seventh, and eleventh day, respectively, after the consumption of the causative meal. The methods of tissue and stool cultures are described. The importance of culturing the stools and tissues of all clinical cases of botulism is evident."

It may have escaped notice during the busy week of the A. M. A. meetings, that the Community Health and Tuberculosis Demonstration of Framingham, Mass., is desirous of rendering assistance to any town or organization which is interested in similar lines of work.

So much of this work is original that others may profitably avoid the detailed study of useful methods in dealing with certain health problems and secure information which may be helpful. The Framingham organization will be pleased to respond to appeals for information and will render valuable service. Below one may find copies of circulars which may be used in applying for material for educational purposes.

COMMUNITY HEALTH AND TUBERCULOSIS DEMONSTRATION, FRAMINGHAM, MASS.

Exhibit Order Blank (Loan).

Date..............................

Our organization ....*(Name)*......... would like to have a set of Framingham Yardsticks Loan Exhibit Panels for use in..*(State or Community)*.. from ....*(Date)*.... to ....*(Date)*.....

Signed..................................

(This exhibit is loaned without charge, except for transportation expenses.)

COMMUNITY HEALTH AND TUBERCULOSIS DEMONSTRATION, FRAMINGHAM, MASS.

Exhibit Order Blank (Purchase).

Date..............................

Our organization ....*(Name)*......... would like to purchase a set of Framingham Yardsticks Exhibit Panels, for use in ..*(State or Community)*.. at the price of $20.00.

Signed..................................

FRAMINGHAM YARDSTICKS EXHIBIT.

A Semi-Popular Interpretation of the Scientific Findings of the
Community Health and Tuberculosis Demonstration, Framingham, Mass.

The exhibit consists of 20 panels, photographic reproductions of the originals, 14 inches by 17 inches, illustrated.

The subjects of each of the panels are as follows:

1. Framingham Yardsticks.
2. Framingham Children's Health Camp (Illustrated).
3. Framingham School Committee Dental Clinic (Illustrated).
4. Framingham Health Department Baby Clinics. (Illustrated).
5. How Much Tuberculosis Is There?
6. How Many Cases Should Be Under Care?
7. What Special Machinery Will Find Cases?
8. How Many Cases Should Be Found Early?
9. How Many Beds Are Necessary for Tuberculosis?
10. How Many Cases Should Have Institutional Care?
11. What Are the Points of Attack Against Tuberculosis?
12. What Are the Essential Anti-Tuberculosis Measures?
13. What Does Effective Health Work Cost?
14. What Will $2.00 Per Capita Buy in Health Machinery?
15. What Will These Measures Do for Tuberculosis Control?
16. Framingham Industrial Clinic (Illustrated).
17. Framingham State Normal School Dietetic Class (Illustrated).
18. Framingham Civic League (Illustrated).
19. The Framingham Community Health Station (Illustrated).
20. Framingham Facts (Illustrated).

Obituary.

WILLIAM JOSEPH GALLIVAN, M.D.

DR. WILLIAM JOSEPH GALLIVAN, Director of the Division of Tuberculosis of the Massachusetts Department of Public Health, died suddenly of heart disease at his home in South Boston, July 13, 1921, at the age of 56.

Dr. Gallivan was born in South Boston February 2, 1865. One of the old Lawrence School boys, he went on to the Boston Latin School and to Harvard College, taking his A.B. in 1888, in the same class with his brother, Congressman James A. Gallivan. He graduated from Harvard Medical School in 1892. Joining the Massachusetts Medical Society, Dr. Gallivan settled in practice in his native city, being elected to the school board in 1895, and serving until 1903. From 1900 through 1901, he was president of the board; to him was due largely the introduction of commercial courses in the Boston schools. In 1912, he was made head of the child hygiene division of the Boston Board of Health, raising the standard of the physical examination of school children and medical inspection of schools while in office. Upon the reorganization of the board in 1915 he was chairman for a time, becoming a member of the Public Health Council of the State Department of Health by appointment of Governor Walsh in 1916, and relinquishing that position for the head of the Department of Tuberculosis and the sanatoria in 1919.

Dr. Gallivan numbered among his memberships the American Medical Association, Massachusetts Catholic Order of Foresters, Knights of Columbus, South Boston Medical Society, Massachusetts Association of Boards of Health, American Society for the Study and Prevention of Infant Mortality, and the American Public Health Association. He was a Councilor of the Massachusetts Medical Society. The public will miss his service and a genial personality.

He is survived by his widow and a son and daughter.

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RECENT DEATH.

DR. CLARA HANNAH ROGERS RUTTER of 142 East Haverhill Street, Lawrence, Mass., died July 15, 1921. She had practiced forty-two years. She was born in Fort Atkinson, Iowa, November 27, 1854, and was graduated from Boston University Medical School in 1879. She was a member of the Massachusetts Homoeopathic Medical Society.

Miscellany.

COMPARATIVE STATISTICS ON PHYSICAL EXAMINATIONS OF PUPILS OF BOSTON PUBLIC SCHOOLS FROM DECEMBER 1, 1915, TO MARCH 1, 1921.

By William Henry Devine.

	1915-16	1916-17	1917-18	1918-19	1919-20	1920-21
Total number pupils examined	99,862	104,287	104,762	100,564	105,193	107,664
Total number without defects	30,781	38,318	43,128	43,328	46,065	51,158
Total number with defects..	69,081	65,969	61,634	57,226	59,128	56,506
Defects as follows:						
Defective nasal breathing:						
Anterior	1,292	1,297	1,108	826	633	413
Posterior	5,966	5.282	4,975	5,338	6,158	4,652
Hypertrophied tonsils	18,444	14,806	14,037	12,734	14,015	13,258
Defective palate	351	169	121	65	48	54
Cervical glands	18,841	7,746	7,201	4,777	3,351	2,319
Pulmonary disease:						
Tuberculous	44	22	28	15	13	6
Arrested tb.	—	—	5	—	—	—
Question	—	1	—	—	—	—
Non-tuberculous	683	453	456	516	473	297
Cardiac diseases:						
Organic	1,330	1,406	1,624	1,572	1,502	1,455
Functional	1,668	1,716	1,864	2,209	2,215	2,404
Nervous disease:						
Organic	74	48	46	26	54	45
Functional	221	179	138	149	174	160
Chorea	43	23	33	14	16	26
Orthopedic defects:						
Tuberculous	88	76	63	51	37	32
Non-tuberculous	1,698	1,770	1,774	2,221	2,131	1,881
Skin	3.071	2.978	2,308	2,007	1,716	1,706
Rickets	383	326	284	132	146	114
Malnutrition	2,110	1,712	2,087	2,359	2,353	2,543
Totals	56,307	40,010	38,152	35,041	35,035	31,345
Defective teeth	56,750*	55,638*	50,507	44.531	45,567	43,685
GRAND TOTALS	113,057	95,648	88,659	79,572	80,602	75,030

* During the year 1915-16, and from October 1. 1916. to January 1. 1917. defective teeth were classed as primary and secondary. In some instances, if a pupil had defective primary and defective secondary teeth, it was recorded as two defects instead of one. In order to avoid duplication of defects, it was thought advisable to record defective teeth without regard to whether they were primary or secondary. This method was adopted commencing January 1, 1917, and precludes comparison for the two years.

A SPECIAL point to be noted, is the decrease in the number of cases of pulmonary tuberculosis. Allowing for the fact that children are excluded for this disease (in nearly all cases permanently), the figures indicate there are but few new cases.

The number of cases of cardiac disease remains practically the same for the past six years. These figures are compiled from the examinations for forty-eight school physicians, and the fact that they do not vary to any great extent in the past six years, is some evidence of the accuracy of the observations of the medical inspectors.

New interest has been awakened in medical circles on the prevention of cardiac disease. The etiological factors in heart disease are rheumatism and infectious diseases, such as scarlet fever, diphtheria, etc. According to eminent medical authorities, neglected teeth, tonsils and adenoids play an important part in the etiology; it remains for the future to decide the relation of decayed teeth, diseased tonsils and adenoids to the causation.

The writer believes that the prevention of heart disease offers a great field in prophylaxis. The timely notification of parents by school physicians is an important step in prevention procedure. There were many cases where our school notification was the first intimation to parents that a child had cardiac disease. Its early detection in the schools; longer rest in bed after contagious diseases; the proper care of the teeth and removal of diseased tonsils and adenoids should tend to reduce the number of cases.

There is but little change in the number of cases of malnutrition, although recess lunches are increasing each succeeding year. For the past year about seven hundred children have been served daily with lunch in the open-air classes. In addition, about eighty-five hundred were served with daily lunch in school, and about thirty-one thousand brought luncheon each day from home. The average cost of school lunch to pupil is three cents.

The Director of Medical Inspection is inclined to favor milk, with bread or crackers, for recess lunch. It is the most economical food. The milk, delivered at school just before recess, can be distributed without the aid of an attendant. Taken from the bottle by straw or served in paper cups, it is the most easily handled of any of the foods. Fewer children object to milk than to any other form of liquid food.

The writer has interviewed many teachers on the advisability of furnishing recess luncheon to school children. Without exception, they all favor this form of light luncheon. The normal child who has a hearty breakfast between eight and nine o'clock and a substantial dinner at noon does not need food between meals, but a glass of milk is beneficial. It is surprising to note the number of children who attend the morning session without breakfast, or with a very light one. The principal reasons given for this are lack of appetite, no supervision by parents, and hurry in the desire not to be tardy for school.

The school physicians and nurses are giving more attention each year to malnutrition—instructing teachers, children and parents on its prevention and treatment.

The number of cases of defective teeth is decreasing each year. Dental and medical authorities place this defect at eighty to eighty-five per cent. in communities where little attention is given to dental prophylaxis. The percentage in this community is about forty per cent. To realize the improvement, one must compare the dental defects in the higher elementary grades (seventh and eighth) and the high schools, with the general average. With this object in view, the Director of Medical Inspection had a careful survey made of the teeth of pupils in these schools, with the following results:

SCHOOL	NUMBER EXAMINED	NO. WITH DEFECTIVE TEETH	% WITH DEFECTIVE TEETH
Normal (Girls)	253	37	.146
Latin (Girls)	814	79	.097
High (Boys)	1457	449	.308

Of over 17,000 examinations of applicants for employment certificates, only twenty-eight per cent. had defective teeth. These children were between the ages of fourteen and sixteen years.

The examination of children by dental experts in our "steamer classes" (organized for the education of immigrant children) shows that not over five per cent. of the children have defective teeth; that only one had defective sixth year molars.

In an ordinary class of natives of corresponding age, the percentage with defects, would be over fifty per cent. for sixth year molars, and much higher for other defects. This certainly furnishes food for thought.

A careful questioning revealed the fact that few of the immigrant children had ever used a tooth brush before their arrival in this country. Their diet consisted of plain food, and but little candy, ice cream or other sweets such as our children have.

VENEREAL DISEASE CONFERENCE.

[From the *Bulletin of the American Social Hygiene Association.*]

THE conference on the diagnosis and treatment of gonorrhea and syphilis, conducted in the Newark City Dispensary and Hospital under the auspices of the Venereal Disease Bureaus of the State and Newark City Health Departments, were attended by approximately one hundred and fifty physicians from New Jersey, New York and Pennsylvania.

THE WEDNESDAY MEETING—SYPHILIS.

The first session began with an exhibition of seventy stereopticon slides illustrating the cutaneous manifestation of syphilis, some of which are but rarely seen today because of the improvement in the methods of diagnosis and treatment. Dr. Howard Fox, Clinical Professor of Dermatology at the New York Polyclinic Medical School and Chairman of the Section of Dermatology of the New York Academy of Medicine, discussed each of the pictures as shown.

Dr. Mihran B. Parounagian, Director of the Department of Syphilology at the Bellevue Hospital and Medical College, described the routine treatment of syphilis as conducted in the Bellevue Clinic, and discussed the administration of drugs used in the treatment of syphilis.

In the afternoon, the Newark Dispensary Clinic staff demonstrated the administration of silver and the old arsphenamine, and the injection of both the soluble and insoluble mercury salts. At this demonstration the large attendance at the dispensary syphilis clinic provided ample material for the injections and the physicians were shown the method by which this large number of patients could be handled expeditiously during the limited time of the clinic.

After a demonstration of the differential diagnosis of the treponema pallida with living cultures of the organisms causing syphilis, and Vincent's angina, the physicians inspected an exhibit of the Wassermann reaction and colloidal gold test.

THE THURSDAY MEETING—GONORRHEA.

The second day of the conference opened with an operative clinic by members of the Newark Clinic staff at the Newark City Hospital. The remainder of the morning was devoted to practical demonstrations of the treatment of gonorrhea and its complications as conducted in the Newark City Dispensary Clinic. This clinic has a very large attendance. The clinic management allows the maximum of attention to the individual patient by dividing the cases according to the stage of the disease, each group being treated by one of four physicians attending the clinic.

In the afternoon, Dr. E. L. Keyes, Jr., Professor of Urology at the Cornell University Medical College, confined his remarks to the fundamentals of the "Pathology and Treatment of Chronic Gonorrheal Urethritis." Dr. Keyes pointed out the importance of obtaining a positive diagnosis in chronic gonorrheal urethritis and urged the use of the complement test as corroborative evidence. He pointed out the inefficiency of surface irrigation when the infection is located below the surface of the urethra, and urged the need for genital mechanical treatment of the infected areas.

The last paper, on "Some Complications and Sequelae of Gonorrhea and Their Tratment," was given by Dr. Colin Luke Begg, Associate Professor of Urology at the New York Post-Graduate Medical College and Hospital, and President of the New York Urological Association. Dr. Begg discussed the symptoms of acute gonorrhea; urged that the patient be placed in bed, if possible; that the diet be regulated; that hot baths be employed twice daily; that alkaline diuretics be employed; and that atropin or belladonna be used to control pain, when necessary. He cautioned against the use of instrumentation in acute gonorrhea, except when in the hands of a physician particularly experienced in their use.

The symptoms of posterior urethritis were discussed and the methods of diagnosis. The rectal examination of the prostate and seminal vesicles was described. Dr. Begg discussed the use of gonorrheal vaccines and concluded with a discussion of the treatment of epididymitis.

The conference on the diagnosis and treatment of gonorrhea and syphilis has demonstrated the advisability of coöperative effort upon the part of municipal and state health departments in rendering a post-graduate service to the medical profession. The health authorities are stimulated by such a conference to further work. Physicians are rendered a distinct service which they appreciate, and the public is ultimately benefited by better diagnosis and better treatment, through more enthusiastic service by the entire medical profession.

RÉSUMÉ OF COMMUNICABLE DISEASES. JUNE, 1921.

General Prevalence.

Of communicable diseases, 6,131 cases were reported for June as compared with 7,372 for May. This is the smallest number reported so far this year. Two diseases, whooping cough and pulmonary tuberculosis, showed increased reported incidence.

Diphtheria. The total number of cases reported for June was 624, a slight decrease from the previous month.

German Measles has shown a substantial decrease, total cases for June being 83 as compared with 128 for May.

Gonorrhea and Syphilis. Gonorrhea was reported in about the usual number, while syphilis showed a decrease, with 185 cases for June as compared with 217 for May.

Measles has shown a substantial decrease, total for June being 1,635 as compared with 2,449 for May.

Lobar Pneumonia—291 cases were reported for June. This is the smallest number so far this year.

Scarlet Fever—492 cases were reported for June as against 649 for May. This is the smallest reported incidence since September, 1920.

Pulmonary Tuberculosis, with 649 cases reported for June, reached the highest mark for any month this year. The total for May was 549.

Typhoid Fever was reported in 59 instances. These were mostly scattered cases.

Whooping Cough showed a slight increase with 509 reported cases as compared with 487 for May.

RARE DISEASES.

Anterior Poliomyelitis was reported from Boston, 1; Fall River, 1; Newton, 1; Salem, 1; total, 4.

Anthrax was reported from Lynn, 1; Worcester, 1; total, 2.

Dog-bite requiring anti-rabic treatment was reported from Brookline, 3; Dighton, 1; Holbrook, 1; Lawrence, 1; Lowell, 5; Plainville, 1; Somerset, 1; total, 13.

Encephalitis Lethargica was reported from

Belmont, 1; Lawrence, 1; Somerset, 1; Springfield, 1; total, 4.

Epidemic Cerebrospinal Meningitis was reported from Boston, 3; Clinton, 1; Everett, 1: Palmer, 1; Peabody, 1; Salem, 1; Worcester, 1; total, 9.

Malaria was reported from Boston, 4; Fitchburg, 1; Milford, 2; total, 7.

Pellagra was reported from Boston, 1.

Septic Sore Throat was reported from Belmont, 1; Boston, 5; Saugus, 2; Somerville, 1; total, 9.

Tetanus was reported from Peabody, 1; Salem, 1; Worcester, 1; total, 3.

Trachoma was reported from Boston, 2; Lawrence, 1; Lowell, 2; Medford, 1; Newton, 1; Somerville, 1; total, 8.

Correspondence.

A HINT FROM OVERSEAS.

London, June 22, 1921.

Mr. Editor:—

American doctors would do well to give some very solid advice to their rich patients who intend to come to England this summer, and they must be rich to permit even thinking of such a luxury. This advice should cover the minor troubles of travelers and of others which seem to be indigenous to the British Isles and which are really tremendously serious for non-acclimated Americans. American remedies are most often unattainable, and the physician must warn travelers that the contents of a small drug store are none too much to carry with one. The English climate is nothing to trifle with, and just now is as battered and war-worn as all the rest of old England.

A cheerful complaint is what the English call "chill on the liver." If one does not dress for January and is not influenced by the occasional pale sunshine, he may stand on a corner and presently feel the keen north wind searching out his vitals. He visits a damp old church,— the same sense of cold. His dinner at eight after a fatiguing day does not go down. He feels ill all over. He has "chill on on the liver." The sympathetic chambermaid whispers "chill on the liver," with deep concern. The head porter repeats, "Oh, that's verry bahd. Me dawter had it."

How then one longs for his home physician! Carter's Little Liver Pills must be taken by the ton at once, accompanied with much whiskey. A doctor in a hotel is two guineas, so one does not have him; besides, his repertoire is very limited.

We are afflicted with a terrible and incurable coryza. We will hasten out for some Rhinitis. It will be of no use to hasten, because it is not to be had. An ointment perhaps. Oh yes, a "perfumed vaseline, very nice." We visit eight chemists for Bismuth Subnitrate, to be met with the news that the British Pharmacopoeia "does not give it." We can be accommodated with "sweetened bismuth tablets" at five pence per quarter. They will have "an extraordinary effect."

Even an occasional day when the thermometer gets over seventy does not thaw one out. Our home doctor might have warned us about it. We begin to think that the Englishman vastly needs his whiskey and ought not to be deprived of it.

We need a laxative. Why did not our own doctor tell us the difficulties? Hunyadi? "Yes, madam, I will ascertain." Yes, a three-quart bottle, so convenient for one's satchel! We half turn away, to meet the usual chemist's sign on Wednesdays, "Closed for other than necessary medical supplies, perfumery and sweets." We grasp the bottle! Stay, could we have a little in a tumbler at once? The chemist, having ascertained, produces a tremendous flip glass to hold a quart. Five shillings does not make up for our smiles.

This does not intend to belittle the splendid war work of the English surgeons, but with medicine it seems quite different. With any nose, ear or throat trouble one misses the deftness, the whole technique of the American man. Of dentistry the nation is just sitting up and taking notice. One cannot but think, had she been in America, that Lady Randolph Churchill would not have had her foot amputated because she broke her ankle!

Of course, England is far from normal yet, but then, to Americans she never is, and some quite naturally resent being told of American doctors and the glories of American drug stores. If one is perfectly strong and well, one can enjoy England, but her climate will get one in the end. And then how much we need our American remedies which we left at home!

London has one drug store which displays a card, "If it is American, we have it." Not so. Rhubarb and soda? Bellans? Menthol tablets? Alcohol? Musterol? No, No! Well, we must go without, but oh, for our home doctor, and something from home, even calomel in all its glory, to relieve that great British institution "chills on the liver."

MARY FIFIELD KING.

EMBRYOLOGY.

520 Beacon St., Boston, Mass., July 15, 1920.

Mr. Editor:—

My attention has been called to an obvious error which appeared under the heading "Embryology" in my article on "Goitre" which was published in the issue of June 30, 1921, of the BOSTON MEDICAL AND SURGICAL JOURNAL.

Neglect to read the proof sheets is the only reason I offer for my failure to detect the error before publication.

Lewis and Stohr's invaluable work was not unknown to me, for it was from one of its later editions that the data for that part of my article were taken.

In view of the statement published in each issue of the JOURNAL that the JOURNAL does not hold itself responsible for statements made by any contributor, I fail to see how an error on my part could bring ridicule to the JOURNAL or why its editor should be called upon to disavow it publicly.

I regret the mistake, but more deeply do I regret the unusual manner in which attention was called to so obvious an error.

Very sincerely,
JOSEPH STANTON.

MUTUAL MEDICAL INSURANCE.

Mr. Editor:—

I understand there is a movement on foot to either organize a mutual medical insurance company for the defense of the physicians of the Massachusetts Medical Society or to insure as a group in one of the large insurance companies.

I am very much in favor of the group proposition if it could be written and would suggest that it be handled through the office of Mr. George H. Crosbie.

Very truly yours,
C. R. C. BORDEN.